NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	A1	128
CDS ROUTE: 2581128	MILEPOINT: .204	TO	1.022	

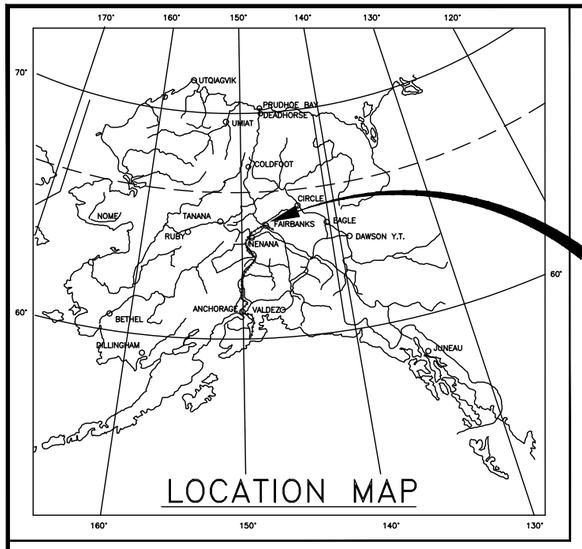
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

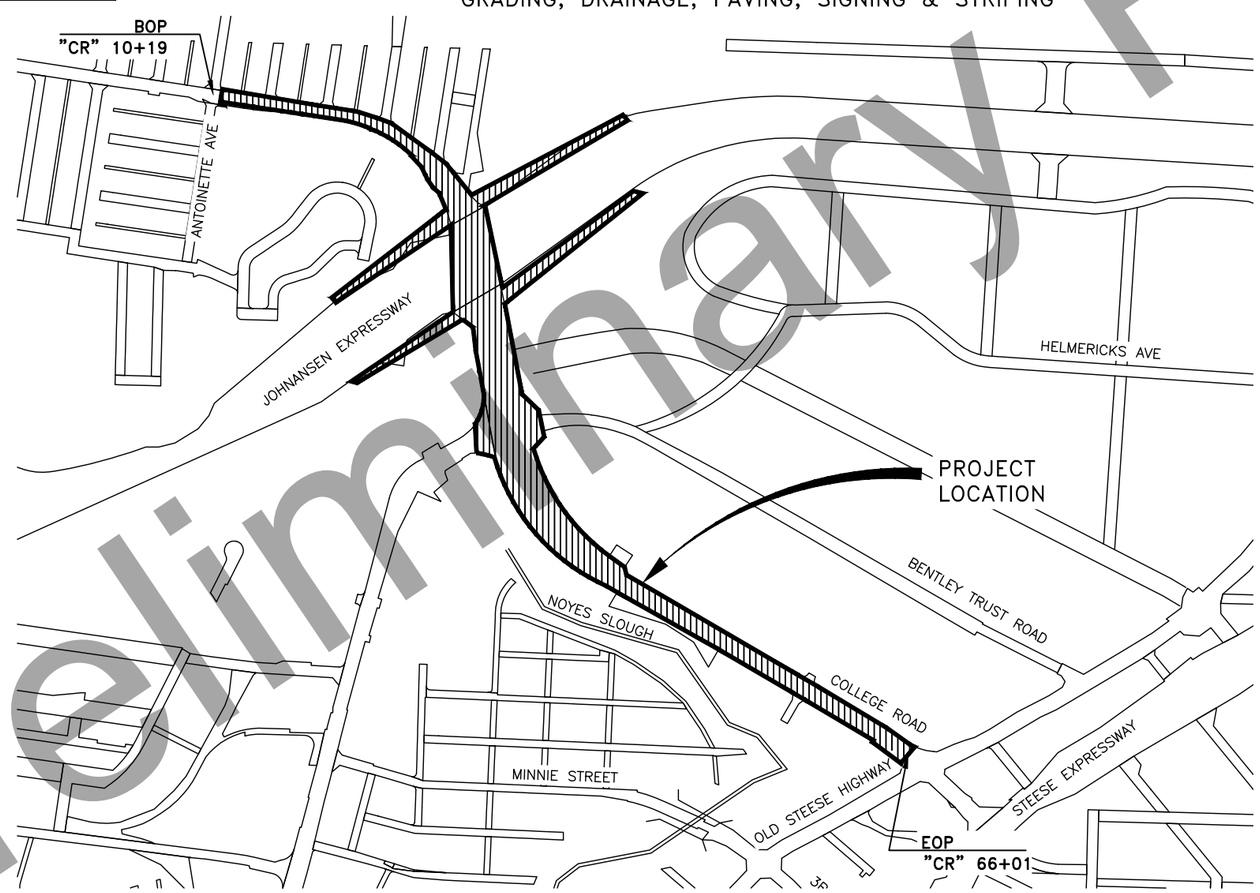
EAST COLLEGE ROAD RESURFACING

FEDERAL #: 0640013

STATE PROJECT #: NFHWY00645

GRADING, DRAINAGE, PAVING, SIGNING & STRIPING





VICINITY MAP

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2–A3	LEGEND, ABBREVIATIONS, & GENERAL NOTES
A4–A5	SURVEY CONTROL (BY DOT&PF)
B1	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1–D4	SUMMARY TABLES
E1–E8	MISCELLANEOUS DETAILS
G1–G39	GRADING & LAYOUT DETAILS
H1–H24	SIGNING & STRIPING
K1–K10	AUTOMATIC VEHICLE CLASSIFICATION COUNTER (AVC)
N1–N7	BRIDGE PLANS
Q1–Q11	EROSION & SEDIMENT CONTROL PLANS
T1–T3	TRAFFIC CONTROL PLANS
V1–V15	ALASKA STANDARD PLANS

THE FOLLOWING ALASKA STANDARD PLANS APPLY TO THIS PROJECT:

C–04.12, C–05.20, I–20.20, I–81.00, L–23.02, S–00.12, S–01.02, S–05.02, S–31.02, S–30.05, S–32.02, T–20.04, T–21.04, T–22.04, T–23.01

DESIGN DESIGNATIONS

ADT (2022)	12,160
ADT (2027)	12,467
DHV (11%)	1,338
PERCENT TRUCKS (T)	3.1%
DIRECTIONAL SPLIT (D)	46/54
DESIGN SPEED (V)	35 MPH
DESIGN EAL'S (2027)	TBD

PROJECT SUMMARY

	COLLEGE ROAD	JOHANSEN RAMPS
WIDTH OF PAVEMENT	MAX: 90' MIN: 53'	MAX: 35' MIN: 25'
LENGTH OF GRADING	5,581'	4,439'
LENGTH OF PAVING	5,581'	4,439'
LENGTH OF PROJECT	5,581'	4,439'

RUSSELL JOHNSON, P.E., PROJECT MANAGER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY:

_____ DATE _____

Sarah E. Schacher, P.E.
Preconstruction Engineer, Northern Region

ACCEPTED FOR CONSTRUCTION:

_____ DATE _____

Joseph P. Kemp, P.E.
Acting Regional Director, Northern Region

Preliminary Plans

C:\dowl_pw\d0395476\00645_A-A1 Thu, Jun/09/22 05:09am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	A2	A5

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		BM
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE	5+00	
MISCELLANEOUS CENTERLINE	10+00	
STATION EQUATION	"L"48+97.23 POT BK= "O"48+97.23 PC AHD	
PROJECT RIGHT-OF-WAY LINE	R/W	
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE	C/A	
UTILITY EASEMENT LINE	PUE	
TEMPORARY EASEMENT LINE (TCP OR TCE)	TCP	
ACCESS OR SECTION LINE EASEMENT	ACCESS EASEMENT	
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE	T. 2 N. / T. 1 N. / T. 1 E. / T. 2 E.	

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	SS	SS
FUEL LINE	O	O
GAS LINE	G	G
WATER LINE	W	W
METER, VALVE, FIRE HYDRANT	W	W
EXISTING STORM DRAIN (FLOW DIRECTION →)	SD	
PROPOSED STORM DRAIN	S-10, S-11, P-11, P-10, MH	
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE	T	T
DIRECT BURIAL ELECTRIC CABLE	E	E
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT	T	T
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE	MH	MH
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE	X	X
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX	MB	MB
RAILROAD TRACKS		
RAILROAD DEVICES	CROSS-BUCK, FLASHING LIGHT	CANTILEVER, SWITCH
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS	H	
POST OR BOLLARD		
WELL OR MONITORING WELL	W	
SEPTIC PIPE	S, MW	
FUEL TANK FILL PIPE/VENT	P	
SATELLITE DISH	SAT. DISH	
TEST HOLE	TH	
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

H = HOUSE
G = GARAGE
M = MERCHANT/STORE
B = BARN
S = SHED
P = PRIVY
SS= SERVICE STATION
W = WAREHOUSE

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		5
JUNCTION BOX, TYPE II		6
JUNCTION BOX, TYPE III		3
SIGNAL FACE, VEHICULAR	42	42
SIGNAL FACE, BACKPLATE	42	42
SIGNAL FACE, LEFT TURN, BACKPLATE	43	43
SIGNAL FACE, PEDESTRIAN	01	01
LOOP DETECTOR	33	73
VIDEO DETECTOR	2	2
RADAR DETECTOR	4	4A
OPTICOM DETECTOR	1	1
PEDESTRIAN PUSH BUTTON	1	1
SIGNAL POST W/O MAST ARM		1
SIGNAL POLE W/MAST ARM		4
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		22
RIGID METAL CONDUIT		

SUPPLEMENTAL LEGEND

	PROPOSED
GRADING	
UNMARKED CROSSWALK REFERENCE LINE	
GRADE BREAK REFERENCE LINE	
SLOPE LABEL REFERENCE LINE	
SIGNING AND STRIPING SHT CENTERLINE	5+00
BACK OF SIDEWALK MATERIAL	
HMA, DRIVEWAY, TYPE II, CLASS B	
ROCK MULCH	
TOPSOIL/SEEDING	
RAILROAD	
DROP ARM GATE W/FLASHING LIGHT	
DROP ARM GATE W/O FLASHING LIGHT	

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

LEGEND

Preliminary Plans

PLANS DEVELOPED BY: BOWE, QECA\ALASKA, DEP\WORTMCKRTZ\ATFORK\NSP\NEDA\0898, 0.5\SBS\DOL\LEFKELLIR\RSAD, NS\RITEER\ROREDNBA\NSS1 ARE\GRROBO\(\0\0\7)\BZANKGZ7\AK 99709 (907)451-2200
C:\dowl_pw\d0395476\00645_A-A2 Thu, Jun/09/22 05:09am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	A3	A5

ABBREVIATIONS

ABC – AGGREGATE BASE COURSE
AASHTO – AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC – ACRES
ACP – ASPHALT CONCRETE PAVEMENT
ACS – ALASKA COMMUNICATIONS SYSTEMS
ADA – AMERICANS WITH DISABILITIES ACT
ADEC – ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ADT – ANNUAL AVERAGE DAILY TRAFFIC
AP – ANGLE POINT
APPROX – APPROXIMATELY
ARRC – ALASKA RAILROAD CORPORATION
ATB – ASPHALT TREATED BASE
AVAP – AS VERTICAL AS POSSIBLE
BLDG – BUILDING
BMP – BEST MANAGEMENT PRACTICES
BOP – BEGINNING OF PROJECT
BSWK – BACK OF SIDEWALK
C/A – CONTROLLED ACCESS LINE
CABC – CRUSHED ASPHALT BASE COURSE
CB – CATCH BASIN
CDS – CONTRACT DELIVERY SERVICE
CL – CENTER LINE
C&G – CURB AND GUTTER
CMP – CORRUGATED METAL PIPE
CMU – CONCRETE MASONRY UNIT
CO – CLEANOUT
COF – CITY OF FAIRBANKS
CONC – CONCRETE
CONT – CONTINUOUS
CPLG – COUPLING
CPP – CORRUGATED POLYETHYLENE PIPE
CR – CURB RAMP
CTC – CENTER TO CENTER
CTE – CONNECT TO EXISTING
CU – COPPER
DEMO – DEMOLITION
DHV – DESIGN HOURLY VOLUME
DIA – DIAMETER
DIP – DUCTILE IRON PIPE
DOT&PF – DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DSC – DESCRIPTION
DTL – DETAIL
DWY – DRIVEWAY
EA – EACH
ED – EDGE DRIVEWAY
EG – EXISTING GROUND
EL – ELEVATION
EOP – END OF PROJECT
EP – EDGE PAVEMENT
ESAL – EQUIVALENT SINGLE AXLE LOAD
EXPWY – EXPRESSWAY
FG – FINISHED GROUND
FH – FIRE HYDRANT
FL – FLOW LINE
GB – GRADE BREAK
GCI – GENERAL COMMUNICATIONS INC.
GHU – GOLDEN HEART UTILITY
GP – GRADE POINT
GVEA – GOLDEN VALLEY ELECTRIC ASSOCIATION
HDPE – HIGH DENSITY POLYETHELENE
HMA – HOT MIX ASPHALT
HP – HIGH POINT
IE – INVERT ELEVATION
INV – INVERT
L – LENGTH
LC – LOAD CENTER
LED – LIGHT EMITTING DIODE
LF – LINEAR FEET
LG – LIP OF GUTTER
LMA – LUMINAIRE MAST ARM
LP – LOW POINT
LT – LEFT
MH – MANHOLE
MIL – MILLIMETERS
MIN – MINIMUM
MJ – MECHANICAL JOINT
MOA – MEMORANDUM OF AGREEMENT
MTAC – MATANUSKA TELEPHONE ASSOCIATION COMPANY
MTE – MATCH TO EXISTING
NFS – NON–FROST SUSCEPTIBLE
NTS – NOT–TO–SCALE
OFF – OFFSET
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PGP – PROFILE GRADE POINT
PI – POINT–OF–INTERSECTION
PIB – POINT–OF–INTERSECTION, BUFFER
POC – POINT–ON–CURVE
PRC – POINT–OF–REVERSE CURVE
PT – POINT–OF–TANGENCY
R – RADIUS
RMC – RIGID METAL CONDUIT
ROW – RIGHT–OF–WAY
RP – RADIUS POINT
RPM – REINFORCED PLASTIC MORTAR
RT – RIGHT
R/W – RIGHT–OF–WAY
RW – RETAINING WALL
SMA – SIGNAL MAST ARM
SS – SANITARY SEWER SERVICE
SSMH – SANITARY SEWER MANHOLE
SHLDR – SHOULDER
SH – SHEET
SPRK – SPRINKLER
ST – STREET
STA – STATION
STD – STANDARD
SWK – SIDEWALK
SWPPP – STORM WATER POLLUTION PREVENTION PLAN
SY – SQUARE YARD
TA – TOP OF ASPHALT
TBC – TOP BACK OF CURB
TC – TOP OF CONCRETE
TCE – TEMPORARY CONSTRUCTION EASEMENT
TCP – TEMPORARY CONSTRUCTION PERMIT
TCP – TRAFFIC CONTROL PLAN
TYP – TYPICAL
VPI – VERTICAL POINT OF INTERSECTION
W/ – WITH
WS – WATER SERVICE
WWM – WELDED WIRE MESH

GENERAL NOTES

1. THE 2020 EDITION OF THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (DOT&PF) STANDARD SPECIFICATIONS ARE MADE PART OF THIS CONTRACT, WITH CURRENT REVISIONS AS APPLICABLE.

2. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF THE PROJECT LIMITS TO BETTER OR EQUAL–TO–EXISTING CONDITION AT THEIR EXPENSE, UNLESS OTHERWISE AGREED TO WITH DOT&PF.

3. WITHIN THE PROJECT LIMITS PROTECT ALL EXISTING FEATURES DESIGNATED TO REMAIN FROM DAMAGE, UNLESS OTHERWISE NOTED. ANY REPAIRS WILL BE AT THE CONTRACTOR'S EXPENSE.

4. UNLESS OTHERWISE NOTED ON PLANS, PRESERVE AND PROTECT ALL FEATURES ON PRIVATE PROPERTY. WHERE FEATURES CANNOT BE PROTECTED, REMOVE AND REPLACE ITEMS. CONTRACTOR TO RETURN ALL PRIVATE PROPERTY TO MATCH CONDITION PRIOR TO CONSTRUCTION. PAYMENT IS SUBSIDIARY TO PAY ITEMS RELATED TO THE WORK BEING PERFORMED.

5. CLEARING LIMITS SHALL EXTEND 3 FEET BEYOND BACK OF SIDEWALK, PATH, OR CURB (UNLESS NOTED OTHERWISE) AND SHALL NOT EXCEED THE ROW, TCE, OR TCP.

6. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO HAUL, PLACE, STOCKPILE, AND DOUBLE HANDLE MATERIALS IS SUBSIDIARY TO 203 SERIES PAY ITEMS.

7. ALL REQUIRED EXCAVATIONS ARE SUBSIDIARY TO RESPECTIVE PAY ITEMS.

8. UTILITIES (OVERHEAD AND BURIED), TO THE EXTENT THEY ARE KNOWN, ARE SHOWN ON THE PLANS. BEFORE CONDUCTING ANY GROUND–DISTURBING ACTIVITIES THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS BY CONTACTING THE DIGLINE AT 1–800–478–3121, THE UTILITY COMPANY, OR THE CITY OF FAIRBANKS AND DOT&PF SIGNAL DEPARTMENTS. UTILITY COMPANIES WITHIN THE PROJECT LIMITS ARE LISTED IN SECTION 651 OF THE SPECIAL PROVISIONS.

9. THE PROJECT LIMITS ARE DEFINED AS FOLLOWS:

   A. TO THE TCP OR TCE BEYOND THE R/W LINE;

   B. WHERE ALL WORK IS WITHIN THE R/W AND THERE IS NO TCE/TCP, TO 3 FEET BEYOND THE BACK OF SIDEWALK OR PATH, NOT EXCEEDING THE ROW;

   C. TO THE LIMITS OF STAGING AREAS AND APPROVED TRAFFIC CONTROL PLAN(S).

10. ENVIRONMENTAL COMMITMENTS ARE INCLUDED IN APPENDIX A.

11. COMMITMENTS RELATED TO TCE'S ARE NOTED ON THE PLANS AND ARE DESCRIBED IN DETAIL IN THE MEMORANDUMS OF AGREEMENT (MOA'S) FOR EACH AFFECTED PARCEL. SEE APPENDIX A.

12. THE ARRC IS REPLACING ELEMENTS OF THE RAILROAD SIGNAL NEAR ILLINOIS STREET. THE CONTRACTOR SHALL COORDINATE WITH THE ARRC PROJECT AND WORK IN ACCORDANCE WITH SECTION 651. THE CONTRACTOR SHALL COORDINATE WITH ARRC PRIOR TO REMOVAL OF EXISTING RAILROAD SYSTEM PAVEMENT MARKINGS AND SIGNS NOTED FOR SALVAGE ON THE PLANS. A COPY OF THE UTILITY AGREEMENT BETWEEN THE ARRC AND THE DEPARTMENT IS INCLUDED IN APPENDIX A.

13. IF CLEARING ACTIVITIES OCCUR, MECHANIZED VEGETATION CLEARING ACTIVITIES WILL BE AVOIDED DURING MIGRATORY BIRD NESTING SEASON (MAY 1–JULY 15) UNLESS A MITIGATIVE WORK PLAN IS SUBMITTED BY THE CONTRACTOR AND APPROVED BY DOT&PF.

14. THE CONTRACTOR SHALL ADHERE TO ADEC GENERAL CONSTRUCTION PERMIT.

15. REMOVAL OF EXISTING NON–OPERABLE INDUCTIVE LOOPS AND CONDUITS AT SIGNALIZED INTERSECTION APPROACHES IS SUBSIDIARY TO 308.0001.0000 CRUSHED ASPHALT BASE COURSE.

Preliminary Plans

ABBREVIATIONS AND GENERAL NOTES

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
C:\dowl_pw\d0395476\00645_A–A3 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	A4	A5

TO BE PROVIDED BY DOT&PF SURVEY GROUP

Preliminary Plans

SURVEY CONTROL

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_A-A4 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	A5	A5

TO BE PROVIDED BY DOT&PF SURVEY GROUP

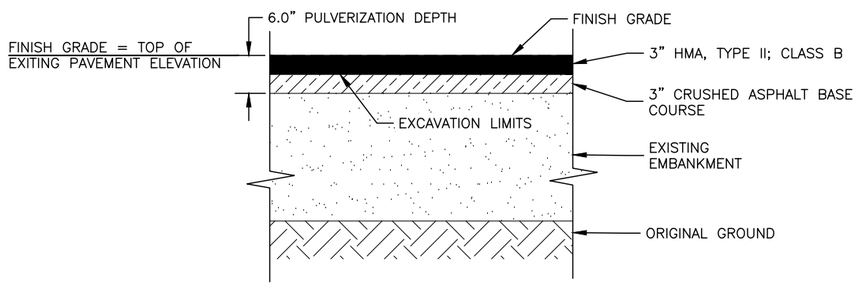
Preliminary Plans

SURVEY CONTROL

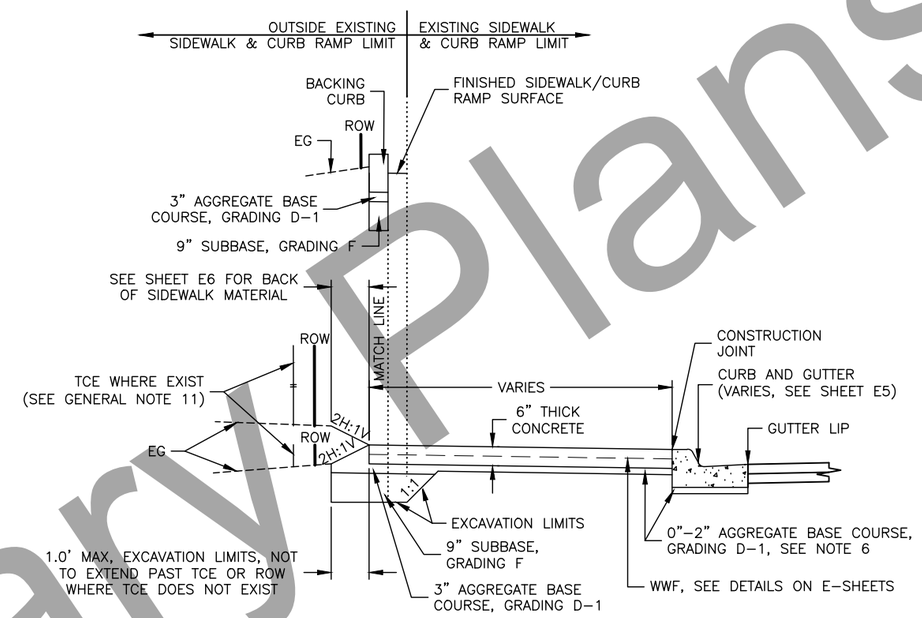
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_A-A5 Thu, Jun/09/22 05:10am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	B1	B1



PAVEMENT STRUCTURAL SECTION



SIDEWALK & CURB RAMP WIDENING

NOTES:

1. SAW CUT ALL MATCH POINTS. APPLY STE-1 ASPHALT FOR TACK COAT TO THE VERTICAL FACE OF SAW CUT LINES, CURB AND GUTTER, CURB, AND STRUCTURES WITHIN THE PROPOSED PAVING LIMIT.
2. MAINTAIN EXISTING ROADWAY CROWN, POINT OF ROTATION, SUPERELEVATIONS, TRANSITIONS, CROSS-SLOPES, AND DRAINAGE PATTERNS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. PULVERIZING SHALL EXTEND THE FULL WIDTH OF ROADWAY SECTION TO LIP OF GUTTER, FACE OF CURB (WHERE THERE IS NO EXISTING GUTTER), JERSEY BARRIER, FACE OF GUARDRAIL, OR EDGE OF PAVEMENT, WHICHEVER IS LESS, OR AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT ASPHALT AT THE LIP OF GUTTER SO THERE IS NOT A VERTICAL EDGE GREATER THAN 1/4".
5. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D-1 IN AREAS WHERE AUTOMATIC VEHICLE CLASSIFICATION COUNTER (AVC) LOOPS WILL BE INSTALLED. SEE K-SHEETS FOR LIMITS.
6. AS REQUIRED FOR GRADING, PLACE AGGREGATE BASE COURSE, GRADING D-1 AS A LEVELING COURSE IN AREAS WHERE CURB AND GUTTER OR SIDEWALK/CURB RAMP IS REPLACED.
7. PLACEMENT OF PROCESSED CRUSHED ASPHALT BASE ON UNSIGNALIZED APPROACHES (EXCEPT FOR ON AND OFF RAMPS AND CHANNELIZED RIGHT-TURN LANES) IS PAID FOR BY PAY ITEM 308.0001.0000 CRUSHED ASPHALT BASE COURSE.
8. EXISTING HMA REMOVAL AT UNSIGNALIZED APPROACHED (EXCEPT FOR ON AND OFF RAMPS AND CHANNELIZED RIGHT-TURN LANES) IS PAID FOR BY PAY ITEM 202.0002.0000 REMOVAL OF PAVEMENT. EXCAVATION OF EXISTING BASE COURSE AT THESE LOCATIONS IS SUBSIDIARY TO SECTION 308.

TYPICAL SECTIONS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_B-B1 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	C1	C1

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
202.0002.0000	REMOVAL OF PAVEMENT	SY	4,100
202.0003.0000	REMOVAL OF SIDEWALK	SY	467
202.0009.0000	REMOVAL OF CURB AND GUTTER	LF	6,100
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	453
304.0001.000F	SUBBASE, GRADING F	TON	145
308.0001.0000	CRUSHED ASPHALT BASE COURSE	SY	56,000
401.0001.002B	HMA, TYPE II; CLASS B	TON	9,450
401.0004.0000	ASPHALT BINDER, GRADE PG 52E-40	TON	425
401.0008.002B	HMA PRICE ADJUSTMENT, TYPE II; CLASS B	CS	1
401.2010.0000	HMA, SIDEWALKS AND PATHS	TON	68
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	24
501.2001.0001	SPALL REPAIR	CS	1
501.2002.0001	CRACK REPAIR	CS	1
503.2001.0000	REINFORCING STEEL REPAIR - SPRAY METALIZE	CS	1
508.0001.0000	WATERPROOFING MEMBRANE, SPRAY-APPLIED	LS	1
604.0004.0000	ADJUST EXISTING MANHOLE	EACH	4
604.0016.0000	ADJUST INLET FRAME AND GRATE	EACH	35
608.0001.0006	CONCRETE SIDEWALK, 6 INCHES THICK	SY	1,500
608.0006.0000	CURB RAMP	EACH	51
609.0002.0001	CURB AND GUTTER, TYPE 1	LF	5,650
609.0003.0000	BACKING CURB	LF	910
615.0001.0000	STANDARD SIGN	SF	473
615.0006.0000	SALVAGE SIGN	EACH	100
618.0002.0000	SEEDING	LB	30
618.0003.0000	WATER FOR SEEDING	MGAL	7.5
620.0001.0000	TOPSOIL	SY	830
621.2018.0000	ROCK MULCH	SY	99
626.2013.0000	ADJUST SANITARY SEWER CLEANOUT	EACH	1
627.0010.0000	ADJUSTMENT OF VALVE BOX	EACH	1
639.2000.0000	APPROACH	EACH	32
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	1
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LS	1
641.0005.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CS	1
641.0006.0000	WITHHOLDING	CS	1
641.0007.0000	SWPPP MANAGER	LS	1
642.0001.0000	CONSTRUCTION SURVEYING	LS	1
642.0013.0000	THREE PERSON SURVEY PARTY	CS	ALL REQUIRED
643.0002.0000	TRAFFIC MAINTENANCE	LS	1
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LS	1
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CS	1
643.0025.0000	TRAFFIC CONTROL	CS	1
643.0032.0000	FLAGGING	CS	1
644.0001.0000	FIELD OFFICE	LS	1
645.0001.0000	TRAINING PROGRAM, 1 TRAINEE/APPRENTICE	LH	500
646.0001.0000	CPM SCHEDULING	LS	1
660.2004.0000	ADJUST JUNCTION BOX	EACH	21
660.2005.001A	JUNCTION BOX, TYPE 1A	EACH	11
662.2004.0000	FIBER OPTIC MANHOLE - ADJUSTMENT	EACH	1
669.2007.0000	AUTOMATIC VEHICLE CLASSIFICATION SITE 01	LS	1
670.0013.0000	PAINTED TRAFFIC MARKINGS	LF	34
670.2000.0000	MMA PAVEMENT MARKINGS	LS	1
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	LS	1
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, PETROLEUM	CS	1
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, RCRA SOLVENTS	CS	1
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, UNCONTAMINATED SOILS	CS	1
802.2001.0000	LABORATORY TESTING, PETROLEUM	EACH	1
802.2001.0000	LABORATORY TESTING, SOLVENTS	EACH	1
802.2002.0000	MEDIA SPECIALIST	LS	1
641.0003.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LS	ALL REQUIRED
643.2005.0000	PUBLIC INFORMATION PROGRAM	LS	ALL REQUIRED
644.0006.0000	VEHICLE	LS	ALL REQUIRED

TABLE OF ESTIMATING FACTORS

ITEM NO.	PAY ITEM	ESTIMATING FACTOR
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	2 TON/CY
304.0001.000F	SUBBASE, GRADING F	2 TON/CY
401.0001.002B	HMA, TYPE II; CLASS B	113 LB/SY/IN
401.0004.0000	ASPHALT BINDER, GRADE PG 52E-40	4.5% OF 401.0001.002B WEIGHT
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.1 GAL/SY
618.0002.0000	SEEDING	4 LB/1,000 SF
618.0003.0000	WATER FOR SEEDING	1 GAL/SF

Preliminary Plans

ESTIMATE OF QUANTITIES

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395549\00645_C-C1 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	D1	D4

401.2010.0000 - HMA, SIDEWALKS AND PATHS

SHEET	STATION FROM	STATION TO	OFFSET	WEIGHT (TON)	REMARKS
H3	"CR" 10+00	"CR" 15+00	LT	2.5	
H4	"CR" 15+00	"CR" 21+00	LT	0.3	
H6, H7	"CR" 26+00	"CR" 31+00	LT/RT	15.4	
H9	"CR" 37+00	"CR" 43+00	LT/RT	36.5	
H12	"CR" 55+00	"CR" 61+10	LT/RT	8.3	
H13	"CR" 61+10	"CR" 66+01	LT/RT	5.0	
			TOTAL:	68.0	TON
			PAY ITEM QUANTITY:	68	TON

604.0004.0000 - ADJUST EXISTING MANHOLE

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H3	"CR" 10+18	41.1 RT	1	STORM SEWER
H8	"CR" 33+79	14.1 RT	1	STORM DRAIN
H10	"CR" 44+12	12.4 RT	1	STORM DRAIN
H12	"CR" 58+76	39.0 RT	1	STORM DRAIN
		TOTAL:	4	EACH
		PAY ITEM QUANTITY:	4	EACH

604.0016.0000 - ADJUST INLET FRAME AND GRATE

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H3	"CR" 14+70	21.2 LT	1	
H3	"CR" 14+79	24.0 RT	1	
H4	"CR" 19+45	21.4 RT	1	
H5	"CR" 24+99	7.3 LT	1	
H5	"CR" 25+19	39.2 RT	1	
H6, H7	"CR" 26+19	39.1 LT	1	
H6, H7	"CR" 27+05	39.3 LT	1	
H6, H7	"CR" 27+08	43.3 RT	1	
H6, H7	"CR" 29+59	42.2 RT	1	
H8	"CR" 32+02	40.6 RT	1	
H8	"CR" 35+94	41.3 LT	1	
H8	"CR" 36+19	52.1 RT	1	
H9	"CR" 37+15	71.0 RT	1	
H9	"CR" 37+22	42.9 RT	1	
H9	"CR" 37+54	113.1 RT	1	
H9	"CR" 37+78	90.9 RT	1	
H9	"CR" 38+80	49.9 RT	1	
H9	"CR" 42+44	39.5 LT	1	
H9	"CR" 42+44	15.2 RT	1	
H10	"CR" 43+83	13.8 RT	1	
H10	"CR" 44+03	39.2 LT	1	
H10	"CR" 46+53	31.1 LT	1	
H10	"CR" 46+63	0.4 LT	1	
H11	"CR" 54+34	34.2 LT	1	
H11	"CR" 54+35	34.4 RT	1	
H12	"CR" 59+44	82.7 RT	1	
H13	"CR" 62+67	34.7 RT	1	
H13	"CR" 62+79	34.2 LT	1	
H13	"CR" 64+76	46.3 RT	1	
H14	"NEL" 109+24	1.1 RT	1	
H6, H7	"SER" 200+24	19.9 LT	1	
H6, H7	"WXL" 401+29	17.5 RT	1	
H15	"WXR" 301+10	16.9 LT	1	
H16	"EXL" 808+82	4.3 LT	1	
H5, H6	"EXR" 701+08	4.9 RT	1	
		TOTAL:	35	EACH
		PAY ITEM QUANTITY:	35	EACH

608.0001.0006 - CONCRETE SIDEWALK, 6 INCHES THICK

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	AREA (SY)	REMARKS
H3	"CR" 10+20	49.8 RT	"CR" 10+61	34.6 RT	36.6	
H3	"CR" 10+30	67.8 LT	"CR" 10+70	23.5 LT	54.4	
H3	"CR" 12+99	22.0 LT	"CR" 13+38	30.8 LT	28.8	
H3	"CR" 14+01	30.1 LT	"CR" 14+38	22.5 LT	24.3	
H4	"CR" 16+00	22.5 LT	"CR" 16+43	30.0 LT	29.3	
H4	"CR" 17+07	29.9 LT	"CR" 17+50	22.3 LT	30.3	
H4	"CR" 19+27	22.3 LT	"CR" 19+56	38.9 LT	25.7	
H4	"CR" 20+06	35.2 LT	"CR" 20+34	23.8 LT	16.0	
H5	"CR" 22+42	37.9 LT	"CR" 22+70	47.5 LT	14.6	
H6, H7	"CR" 27+99	65.7 LT	"CR" 28+90	69.2 LT	84.7	
H6, H7	"CR" 28+15	66.6 RT	"CR" 28+61	61.2 RT	35.1	
H6, H7	"CR" 28+84	63.3 RT	"CR" 29+33	68.4 RT	45.9	
H6, H7	"CR" 29+04	48.9 LT	"CR" 30+05	47.0 LT	114.8	
H6, H7	"CR" 29+43	49.8 RT	"CR" 29+77	43.0 RT	36.0	
H6, H7	"CR" 30+06	74.1 LT	"CR" 30+27	60.3 LT	28.5	
H6, H7	"CR" 30+35	60.8 RT	"CR" 30+42	61.2 RT	4.0	
H8	"CR" 33+81	62.5 RT	"CR" 33+96	63.2 RT	22.9	
H8	"CR" 34+29	73.7 RT	"CR" 34+77	55.6 RT	55.3	
H8	"CR" 34+57	55.3 LT	"CR" 34+75	55.3 LT	19.9	
H8	"CR" 34+86	55.3 LT	"CR" 35+03	55.3 LT	19.8	
H8	"CR" 34+87	55.0 RT	"CR" 35+05	53.9 RT	19.7	
H8-H9	"CR" 36+95	70.2 LT	"CR" 37+20	75.4 LT	28.0	
H9	"CR" 37+12	78.2 RT	"CR" 37+47	103.1 RT	28.5	
H9	"CR" 37+24	47.2 LT	"CR" 37+73	38.4 LT	90.5	
H9	"CR" 37+45	63.2 RT	"CR" 37+76	50.5 RT	30.1	
H9	"CR" 38+50	64.1 LT	"CR" 38+81	56.3 LT	38.2	
H9	"CR" 38+51	74.5 RT	"CR" 38+79	80.3 RT	36.5	
H10	"CR" 46+58	37.3 LT	"CR" 46+93	51.2 LT	33.0	
H10	"CR" 47+90	44.1 LT	"CR" 48+28	35.7 LT	27.5	
H12	"CR" 55+07	35.5 LT	"CR" 55+45	44.2 LT	27.5	
H12	"CR" 56+09	44.1 LT	"CR" 56+42	35.6 LT	23.8	
H12	"CR" 58+50	35.9 RT	"CR" 58+92	46.5 RT	54.3	
H12	"CR" 58+52	35.4 LT	"CR" 59+05	83.7 LT	58.5	
H12	"CR" 59+45	92.8 LT	"CR" 60+02	35.3 LT	71.9	
H12	"CR" 59+60	46.4 RT	"CR" 60+02	35.8 RT	37.9	
H13	"CR" 62+10	35.2 LT	"CR" 62+55	44.4 LT	39.0	
H13	"CR" 63+15	44.3 LT	"CR" 63+52	35.3 LT	27.5	
H13	"CR" 63+95	47.1 RT	"CR" 64+25	71.1 RT	26.1	
H13	"CR" 64+60	58.8 RT	"CR" 64+90	47.8 RT	29.8	
				TOTAL:	1,455.4	SY
				PAY ITEM QUANTITY:	1,500	SY

Preliminary Plans

SUMMARY TABLES

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395549\00645_D-D1 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	D2	D4

608.0006.0000 - CURB RAMP

SHEET	STATION	OFFSET	TYPE	DETECTABLE WARNING TILE						REMARKS
				LAYOUT TYPE	W1/W2 X DEPTH (SEE NOTE 1) (FT)	RADIUS (FT) DIM "A"	MAX. HEIGHT (FT) DIM "B"	CHORD LENGTH (FT) DIM "C"	ARC LENGTH (FT) DIM "D"	
H3	"CR" 10+24	45.3 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H3	"CR" 10+35	45.3 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H3	"CR" 10+48	34.8 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H3	"CR" 10+50	29.6 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H3	"CR" 13+38	30.8 LT	DIRECTIONAL	RADIAL	--	35.00	2.13	24.02	24.52	
H3	"CR" 14+01	30.1 LT	DIRECTIONAL	RADIAL	--	32.00	1.87	21.54	21.97	
H4	"CR" 16+43	30.0 LT	DIRECTIONAL	RADIAL	--	32.00	1.87	21.54	21.97	
H4	"CR" 17+07	29.9 LT	DIRECTIONAL	RADIAL	--	32.00	1.87	21.54	21.97	
H4	"CR" 19+48	25.8 LT	PARALLEL	RADIAL	--	18.00	0.52	8.57	8.65	
H4	"CR" 20+12	28.7 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
H5	"CR" 22+70	47.5 LT	DIRECTIONAL	RADIAL	--	22.50	1.29	15.00	15.29	
H6, H7	"CR" 28+03	61.9 LT	DIRECTIONAL	CHORDED	10.6/10.6 X 2	--	--	--	--	BACK OF CURB AND FLOW LINE ARE NOT CHORDED
H6, H7	"CR" 28+20	62.7 RT	DIRECTIONAL	CHORDED	13.3/13.3 X 2	--	--	--	--	
H6, H7	"CR" 28+86	64.7 LT	DIRECTIONAL	CHORDED	13.0/13.0 X 2	--	--	--	--	
H6, H7	"CR" 29+04	48.9 LT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H6, H7	"CR" 29+07	42.9 LT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H6, H7	"CR" 29+28	64.8 RT	DIRECTIONAL	CHORDED	12.0/12.0 X 2	--	--	--	--	BACK OF CURB AND FLOW LINE ARE NOT CHORDED
H6, H7	"CR" 29+43	49.8 RT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H6, H7	"CR" 29+44	44.1 RT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H6, H7	"CR" 29+95	54.4 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H6, H7	"CR" 30+14	68.3 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H6, H7	"CR" 30+42	66.1 RT	PERPENDICULAR	RECTANGULAR	4.75 X 2	--	--	--	--	EXISTING CURB RAMP, REPLACE RAMP AND DETECTABLE WARNING TILE ONLY
H8	"CR" 33+95	73.2 RT	PERPENDICULAR	RECTANGULAR	10.0 X 2	--	--	--	--	
H8	"CR" 34+32	68.4 RT	DIRECTIONAL	CHORDED	11.7/11.7 X 2	--	--	--	--	
H8	"CR" 34+75	65.3 LT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H8	"CR" 34+77	65.6 RT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H8	"CR" 34+85	65.3 LT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H8	"CR" 34+87	65.0 RT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	
H9	"CR" 37+13	69.2 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 37+30	52.1 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 37+36	89.2 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H9	"CR" 37+50	67.2 RT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 37+62	29.9 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 37+71	51.6 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 37+76	55.5 RT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H9	"CR" 38+53	68.9 RT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
H9	"CR" 38+61	55.0 LT	PERPENDICULAR	RECTANGULAR	10.0 X 2	--	--	--	--	
H10	"CR" 46+89	46.8 LT	DIRECTIONAL	CHORDED	16.7/16.7 X 2	--	--	--	--	
H10	"CR" 47+90	44.1 LT	DIRECTIONAL	RADIAL	--	48.50	2.17	28.71	29.15	
H12	"CR" 55+45	44.2 LT	DIRECTIONAL	RADIAL	--	48.50	2.17	28.71	29.15	
H12	"CR" 56+09	44.1 LT	DIRECTIONAL	RADIAL	--	35.00	2.13	24.03	24.53	
H12	"CR" 58+70	36.4 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
H12	"CR" 58+92	46.5 RT	DIRECTIONAL	RADIAL	--	40.50	2.14	25.98	26.44	DETECTABLE WARNING TILE DEPTH IS 4.5'
H12	"CR" 58+93	49.8 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
H12	"CR" 59+60	46.4 RT	DIRECTIONAL	RADIAL	--	44.25	1.33	21.51	21.73	
H12	"CR" 59+62	46.5 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H12	"CR" 59+82	36.8 LT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
H13	"CR" 62+55	44.4 LT	DIRECTIONAL	RADIAL	--	32.00	2.34	24.00	24.60	
H13	"CR" 63+15	44.3 LT	DIRECTIONAL	RADIAL	--	48.50	2.17	28.71	29.15	
H13	"CR" 64+09	46.8 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
H13	"CR" 64+60	58.8 RT	DIRECTIONAL	RADIAL	--	19.50	3.13	21.20	22.42	
TOTAL:		51	EACH							
PAY ITEM QUANTITY:		51	EACH							

NOTES:

1. FOR RECTANGULAR DETECTABLE WARNING TILES, ONLY W1 NEED TO BE LISTED.
2. WIDTH AND LENGTH ARE ONLY PROVIDED FOR RECTANGULAR AND CHORDED DETECTABLE WARNING TILE LAYOUT.
3. REFER TO THE DIRECTIONAL CURB RAMP DETAILS ON E SHEETS FOR INSTALLATION DETAILS, CRITICAL LAYOUT POINTS AND KEY DIMENSIONS.

Preliminary Plans

SUMMARY TABLES

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395549\00645_D-D2 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	D3	D4

609.0002.0001 - CURB AND GUTTER, TYPE 1

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	LENGTH (LF)	REMARKS
H3	"CR" 10+19	49.9 RT	"CR" 10+61	34.1 RT	46.8	
H3	"CR" 10+29	67.9 LT	"CR" 10+70	23.0 LT	67.6	
H3	"CR" 12+99	22.0 LT	"CR" 13+50	61.4 LT	75.8	
H3	"CR" 13+90	48.3 LT	"CR" 14+38	22.1 LT	60.4	
H4	"CR" 16+00	22.0 LT	"CR" 16+54	55.9 LT	74.2	
H4	"CR" 16+95	52.0 LT	"CR" 17+50	21.8 LT	71.5	
H4	"CR" 17+91	22.1 RT	"CR" 19+90	22.0 RT	193.7	
H4	"CR" 19+27	21.8 LT	"CR" 19+55	48.9 LT	48.9	
H4	"CR" 20+01	43.3 LT	"CR" 20+34	23.3 LT	42.7	
H5	"CR" 21+60	22.1 RT	"CR" 25+17	39.7 RT	350.3	
H5	"CR" 22+42	37.4 LT	"CR" 22+66	83.7 LT	74.0	
H5	"CR" 22+92	109.1 LT	"CR" 23+28	58.8 LT	63.7	
H5	"CR" 22+93	25.2 RT	"CR" 24+56	37.4 RT	158.8	
H6, H7	"CR" 28+05	59.4 LT	"CR" 28+77	56.3 LT	80.4	
H6, H7	"CR" 28+31	55.1 RT	"CR" 29+22	59.2 RT	94.2	
H6, H7	"CR" 29+01	43.6 LT	"CR" 30+05	46.8 LT	105.5	
H6, H7	"CR" 29+38	45.3 RT	"CR" 29+77	42.3 RT	39.2	
H6, H7	"CR" 30+28	59.3 LT	"CR" 30+96	42.3 LT	71.1	
H8	"CR" 33+66	13.8 RT	"CR" 34+66	11.1 RT	101.3	
H8	"CR" 33+69	42.0 RT	"CR" 33+80	90.8 RT	71.7	
H8	"CR" 34+21	87.3 RT	"CR" 34+72	43.3 RT	74.6	
H8	"CR" 34+32	42.2 LT	"CR" 34+69	42.2 LT	37.2	
H8	"CR" 34+38	15.1 LT	"CR" 34+64	15.0 LT	25.4	
H8	"CR" 34+93	46.5 RT	"CR" 35+19	51.0 RT	26.8	
H8	"CR" 34+94	42.4 LT	"CR" 35+28	42.1 LT	34.8	
H8	"CR" 34+95	15.0 LT	"CR" 35+15	15.1 LT	19.8	
H8	"CR" 34+96	7.8 RT	"CR" 35+16	5.1 RT	20.0	
H8-H9	"CR" 36+83	52.9 LT	"CR" 37+20	75.1 LT	43.8	
H9	"CR" 37+01	33.4 LT	"CR" 37+74	39.6 LT	234.1	ISLAND
H9	"CR" 37+15	72.4 RT	"CR" 37+53	112.6 RT	55.6	
H9	"CR" 37+28	52.5 RT	"CR" 37+70	95.4 RT	61.0	
H9	"CR" 37+34	0.1 LT	"CR" 37+50	0.4 RT	35.1	BOTH SIDES OF MEDIAN
H9	"CR" 37+70	41.3 RT	"CR" 37+77	66.3 RT	28.7	
H9	"CR" 38+38	77.8 LT	"CR" 40+01	34.4 LT	169.5	
H9	"CR" 38+49	94.1 RT	"CR" 38+79	50.8 RT	59.7	
H9	"CR" 40+80	29.3 LT	"CR" 42+42	40.3 LT	159.5	
H10	"CR" 46+49	31.8 LT	"CR" 47+03	106.8 LT	107.0	
H10	"CR" 47+38	46.8 RT	"CR" 48+46	34.8 RT	113.1	
H10	"CR" 47+67	105.2 LT	"CR" 48+35	35.2 LT	115.7	
H12	"CR" 55+22	35.3 LT	"CR" 56+27	35.4 LT	104.9	
H11-H12	"CR" 53+83	35.1 LT	"CR" 55+67	89.0 LT	215.9	
H12	"CR" 56+02	88.2 LT	"CR" 56+57	35.0 LT	101.6	
H12	"CR" 58+50	35.2 RT	"CR" 59+05	85.4 RT	88.0	
H12	"CR" 58+52	34.9 LT	"CR" 59+06	83.7 LT	83.5	
H12	"CR" 58+53	5.8 LT	"CR" 58+65	5.6 LT	25.7	BOTH SIDES OF MEDIAN
H12	"CR" 59+44	92.8 LT	"CR" 60+02	34.8 LT	94.9	
H12	"CR" 59+44	105.7 RT	"CR" 60+02	35.3 RT	108.5	
H12	"CR" 59+83	6.5 RT	"CR" 59+93	6.3 RT	22.3	BOTH SIDES OF MEDIAN
H13	"CR" 62+10	34.7 LT	"CR" 62+65	84.9 LT	91.4	
H13	"CR" 62+36	35.0 LT	"CR" 63+38	35.0 LT	103.2	
H13	"CR" 62+98	87.4 LT	"CR" 63+91	34.8 LT	130.1	
H13	"CR" 63+63	35.3 RT	"CR" 64+27	79.6 RT	86.6	
H13	"CR" 63+89	36.9 RT	"CR" 64+79	47.2 RT	88.0	
H13	"CR" 64+58	76.9 RT	"CR" 65+47	47.1 RT	108.5	
H13	"CR" 65+05	35.0 LT	"CR" 66+01	35.4 LT	98.0	
H14	"NEL" 107+11	4.1 RT	"NEL" 107+79	4.0 RT	68.2	
H14	"NEL" 109+52	20.2 LT	"NEL" 109+79	19.3 LT	30.9	
H14	"NEL" 109+95	1.5 RT	"NEL" 110+47	2.5 RT	50.5	

609.0002.0001 - CURB AND GUTTER, TYPE 1 (CONT.)

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	LENGTH (LF)	REMARKS
H6, H7, H14	"SER" 200+23	2.7 RT	"SER" 200+97	1.5 RT	68.2	
H6, H7	"WXL" 400+68	19.2 RT	"WXL" 401+29	18.4 RT	60.2	
H6, H7	"NER" 600+04	18.5 RT	"NER" 600+85	19.2 RT	71.1	
H6, H7, H17	"NER" 600+18	3.4 LT	"NER" 601+31	2.2 LT	114.6	
H17	"SEL" 500+53	24.0 LT	"SEL" 500+90	19.5 LT	33.6	
H17	"SEL" 500+58	3.2 RT	"SEL" 501+54	3.3 RT	98.4	
H16	"EXL" 808+51	4.8 LT	"EXL" 808+98	5.0 LT	46.4	
H16	"EXL" 810+02	5.0 LT	"EXL" 810+47	5.0 LT	44.7	
H16	"EXL" 810+09	14.7 RT	"EXL" 810+41	16.2 RT	32.7	
H6, H7	"EXR" 700+21	10.4 RT	"EXR" 700+36	27.6 RT	52.0	
				TOTAL:	5,635.4	LF
				PAY ITEM QUANTITY:	5,650	LF

609.0003.0000 - BACKING CURB

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	LENGTH (LF)	REMARKS
H3	"CR" 10+20	49.8 RT	"CR" 10+34	48.0 RT	17.9	
H3	"CR" 10+37	60.0 LT	"CR" 10+59	33.2 LT	39.0	
H3	"CR" 10+39	45.2 RT	"CR" 10+55	42.3 RT	16.7	
H3	"CR" 13+09	30.7 LT	"CR" 13+38	30.8 LT	28.6	
H3	"CR" 14+01	30.1 LT	"CR" 14+27	29.9 LT	25.4	
H4	"CR" 16+16	30.0 LT	"CR" 16+43	30.0 LT	26.3	
H4	"CR" 17+07	29.9 LT	"CR" 17+34	29.7 LT	27.0	
H4	"CR" 19+39	30.0 LT	"CR" 19+47	35.7 LT	11.2	
H4	"CR" 20+11	36.0 LT	"CR" 20+21	29.9 LT	11.5	
H5	"CR" 22+57	45.3 LT	"CR" 22+70	47.5 LT	14.1	
H6, H7	"CR" 28+03	61.9 LT	"CR" 28+20	65.7 LT	18.1	
H6, H7	"CR" 28+11	55.5 LT	"CR" 28+15	56.5 LT	4.7	
H6, H7	"CR" 28+19	57.4 LT	"CR" 28+21	57.9 LT	2.4	
H6, H7	"CR" 28+20	62.7 RT	"CR" 28+23	63.6 RT	3.6	
H6, H7	"CR" 28+27	64.4 RT	"CR" 28+46	66.8 RT	18.8	
H6, H7	"CR" 28+67	68.3 LT	"CR" 28+80	65.8 LT	13.4	
H6, H7	"CR" 29+09	57.3 LT	"CR" 29+33	53.8 LT	25.0	
H6, H7	"CR" 29+12	70.8 RT	"CR" 29+28	64.8 RT	17.6	
H6, H7	"CR" 29+51	55.6 RT	"CR" 29+66	53.0 RT	15.6	
H10	"CR" 47+90	44.1 LT	"CR" 48+42	45.0 LT	51.7	
H11-H12	"CR" 54+97	46.2 LT	"CR" 55+45	44.2 LT	47.9	
H12	"CR" 55+25	44.6 LT	"CR" 55+25	49.6 LT	5.0	
H12	"CR" 56+09	44.1 LT	"CR" 56+47	45.7 LT	79.6	
H12	"CR" 56+12	54.9 LT	"CR" 56+22	44.5 LT	14.4	
H12	"CR" 58+52	45.8 LT	"CR" 59+01	83.9 LT	76.5	
H12	"CR" 58+61	50.1 RT	"CR" 58+89	49.4 RT	28.2	
H12	"CR" 59+60	46.4 RT	"CR" 59+92	43.7 RT	38.5	
H13	"CR" 62+10	45.3 LT	"CR" 62+55	44.4 LT	45.2	
H13	"CR" 62+49	44.9 LT	"CR" 62+55	52.9 LT	10.0	
H13	"CR" 63+14	48.1 LT	"CR" 63+21	44.7 LT	8.1	
H13	"CR" 63+15	44.3 LT	"CR" 63+71	44.6 LT	57.4	
H13	"CR" 63+99	48.6 RT	"CR" 64+13	60.1 RT	18.5	
H13	"CR" 64+60	58.8 RT	"CR" 65+47	59.9 RT	84.9	
				TOTAL:	902.9	LF
				PAY ITEM QUANTITY:	910	LF

Preliminary Plans

SUMMARY TABLES

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395549\D0645_D-D3 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	D4	D4

618.00002.0000 - SEEDING

SHEET	STATION FROM	STATION TO	OFFSET	WEIGHT (LB)	REMARKS
H3	"CR" 10+00	"CR" 15+00	LT/RT	1.76	
H4	"CR" 15+00	"CR" 21+00	LT	2.21	
H5	"CR" 21+00	"CR" 26+00	LT	1.66	
H6, H7	"CR" 26+00	"CR" 31+00	LT	0.73	
H8	"CR" 31+00	"CR" 37+00	LT/RT	10.50	
H9	"CR" 37+00	"CR" 43+00	LT	0.66	
H10	"CR" 43+00	"CR" 49+00	LT	1.28	
H12	"CR" 55+00	"CR" 61+10	LT	1.79	
H13	"CR" 61+10	"CR" 66+01	LT	1.28	
H14	"NEL" 105+21	"NEL" 110+63	LT/RT	1.51	
H6, H7, H14	"SER" 200+00	"SER" 201+25	RT	0.87	
H6, H7, H15	"WXL" 400+66	"WXL" 402+46	RT	0.64	
H6, H7, H17	"NER" 600+06	"NER" 601+42	LT/RT	1.99	
H17	"SEL" 500+56	"SEL" 506+00	LT/RT	1.17	
H16	"EXL" 804+91	"EXL" 810+67	LT/RT	1.31	
H6, H7, H16	"EXR" 700+00	"EXR" 701+83	RT	0.56	
			TOTAL:	29.9	LB
			PAY ITEM QUANTITY:	30	LB

620.0001.0000 - TOPSOIL

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
H3	"CR" 10+00	"CR" 15+00	LT/RT	48.8	
H4	"CR" 15+00	"CR" 21+00	LT	61.2	
H5	"CR" 21+00	"CR" 26+00	LT	46.0	
H6, H7	"CR" 26+00	"CR" 31+00	LT	20.0	
H8	"CR" 31+00	"CR" 37+00	LT/RT	291.6	
H9	"CR" 37+00	"CR" 43+00	LT	18.2	
H10	"CR" 43+00	"CR" 49+00	LT	35.4	
H12	"CR" 55+00	"CR" 61+10	LT	49.5	
H13	"CR" 61+10	"CR" 66+01	LT	35.4	
H14	"NEL" 105+21	"NEL" 110+63	LT/RT	41.8	
H6, H7, H14	"SER" 200+00	"SER" 201+25	RT	24.1	
H6, H7, H15	"WXL" 400+66	"WXL" 402+46	RT	17.8	
H6, H7, H17	"NER" 600+06	"NER" 601+42	LT/RT	55.1	
H17	"SEL" 500+56	"SEL" 506+00	LT/RT	32.4	
H16	"EXL" 804+91	"EXL" 810+67	LT/RT	36.4	
H6, H7, H16	"EXR" 700+00	"EXR" 701+83	RT	15.6	
			TOTAL:	829.2	SY
			PAY ITEM QUANTITY:	830	SY

621.2018.0000 - ROCK MULCH

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	AREA (SY)	REMARKS
H10	"CR" 47+67	105.2 LT	"CR" 48+42	45.7 LT	36.2	
H12	"CR" 59+45	105.7 RT	"CR" 60+01	55.0 RT	39.0	
H12	"CR" 59+49	92.9 LT	"CR" 59+78	50.0 LT	16.3	
H13	"CR" 63+95	47.1 RT	"CR" 64+17	64.4 RT	7.0	
				TOTAL:	98.5	SY
				PAY ITEM QUANTITY:	99	SY

626.2013.0000 - ADJUST SANITARY SEWER CLEANOUT

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H10	"CR" 47+12	72.3 LT	1	
		TOTAL:	1	EACH
		PAY ITEM QUANTITY:	1	EACH

627.0010.0000 - ADJUSTMENT OF VALVE BOX

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H12	"CR" 59+64	51.0 LT	1	
		TOTAL:	1	EACH
		PAY ITEM QUANTITY:	1	EACH

639.2000.0000 - APPROACH

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H3	"CR" 10+00	CL	1	COLLEGE ROAD
H3	"CR" 10+01	RT	1	ANTOINETTE AVENUE
H3	"CR" 10+03	LT	1	MARGARET AVENUE
H3	"CR" 10+46	CL	1	COLLEGE ROAD
H3	"CR" 13+68	LT	1	MARIETTA AVENUE
H4	"CR" 16+75	LT	1	ELEANOR AVENUE
H4	"CR" 19+84	LT	1	BLANCHE AVENUE
H5	"CR" 23+11	LT	1	HARRIET AVENUE
H6, H7	"CR" 26+62	LT	1	JOHANSEN EXPRESSWAY SOUTHBOUND OFF-RAMP
H6, H7	"CR" 26+70	RT	1	JOHANSEN EXPRESSWAY SOUTHBOUND ON-RAMP
H6, H7	"CR" 27+78	CL	1	COLLEGE ROAD
H6, H7	"CR" 28+08	LT	1	JOHANSEN EXPRESSWAY SOUTHBOUND OFF-RAMP
H6, H7	"CR" 28+33	RT	1	JOHANSEN EXPRESSWAY SOUTHBOUND ON-RAMP
H6, H7	"CR" 28+74	LT	1	JOHANSEN EXPRESSWAY NORTHBOUND ON-RAMP
H6, H7	"CR" 29+12	RT	1	JOHANSEN EXPRESSWAY NORTHBOUND OFF-RAMP
H6, H7	"CR" 29+31	CL	1	COLLEGE ROAD
H6, H7	"CR" 30+45	LT	1	JOHANSEN EXPRESSWAY NORTHBOUND ON-RAMP
H6, H7	"CR" 30+69	RT	1	JOHANSEN EXPRESSWAY NORTHBOUND OFF-RAMP
H8	"CR" 34+16	RT	1	COMMERCIAL DRIVEWAY (U-HAUL)
H8	"CR" 36+61	LT	1	BENTLEY TRUST ROAD
H8	"CR" 36+70	RT	1	ILLINOIS STREET
H9	"CR" 37+66	CL	1	COLLEGE ROAD
H9	"CR" 38+11	LT	1	BENTLEY TRUST ROAD
H9	"CR" 38+15	RT	1	ILLINOIS STREET
H9	"CR" 38+66	CL	1	COLLEGE ROAD
H10	"CR" 47+36	LT	1	COMMERCIAL DRIVEWAY (COSTCO)
H12	"CR" 55+76	LT	1	COMMERCIAL DRIVEWAY (BENTLEY MALL)
H12	"CR" 59+27	LT	1	CROSSOVER WAY
H12	"CR" 59+27	RT	1	CROSSOVER WAY
H13	"CR" 62+87	LT	1	COMMERCIAL DRIVEWAY (BENTLEY MALL)
H13	"CR" 64+35	RT	1	COMMERCIAL DRIVEWAY (REI)
H16	"EXR" 700+71	RT	1	COMMERCIAL DRIVEWAY (U-HAUL)
		TOTAL:	32	EACH
		PAY ITEM QUANTITY:	32	EACH

660.2004.0000 - ADJUST JUNCTION BOX

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H3	"CR" 10+35	44.5 RT	1	
H6, H7	"CR" 28+17	56.9 LT	1	
H6, H7	"CR" 28+25	64.5 RT	1	
H6, H7	"CR" 28+26	68.2 RT	1	
H6, H7	"CR" 28+63	71.7 LT	1	
H9	"CR" 37+39	0.1 RT	1	
H9	"CR" 37+57	53.0 RT	1	
H9	"CR" 37+59	59.4 LT	1	
H9	"CR" 37+62	54.0 RT	1	
H9	"CR" 38+69	61.0 LT	1	
H9	"CR" 38+76	58.6 LT	1	
H12	"CR" 58+52	37.2 RT	1	
H12	"CR" 58+56	36.9 LT	1	
H12	"CR" 58+58	5.8 LT	1	
H12	"CR" 59+89	6.3 RT	1	
H12	"CR" 59+89	37.4 RT	1	
H12	"CR" 59+91	36.9 LT	1	
H13	"CR" 62+49	54.7 LT	1	
H13	"CR" 63+07	55.1 LT	1	
H13	"CR" 63+33	47.5 LT	1	
H13	"CR" 63+71	48.0 LT	1	
		TOTAL:	21	EACH
		PAY ITEM QUANTITY:	21	EACH

660.2005.001A - JUNCTION BOX, TYPE 1A

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H4	"CR" 17+29	28.7 LT	1	
H4	"CR" 19+36	28.7 LT	1	
H9	"CR" 37+65	67.5 LT	1	
H12	"CR" 55+17	36.9 LT	1	
H12	"CR" 56+39	36.9 LT	1	
H12	"CR" 58+64	37.4 LT	1	
H12	"CR" 58+64	37.3 RT	1	
H12	"CR" 59+84	37.7 RT	1	
H12	"CR" 59+89	37.0 LT	1	
H13	"CR" 62+32	36.5 LT	1	
H13	"CR" 63+41	36.5 LT	1	
		TOTAL:	11	EACH
		PAY ITEM QUANTITY:	11	EACH

662.2004.0000 - FIBER OPTIC MANHOLE - ADJUSTMENT

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
H10	"CR" 48+09	42.1 LT	1	ADJUST EXISTING FIBER OPTIC MANHOLE TO GRADE
		TOTAL:	1	EACH
		PAY ITEM QUANTITY:	1	EACH

Preliminary Plans

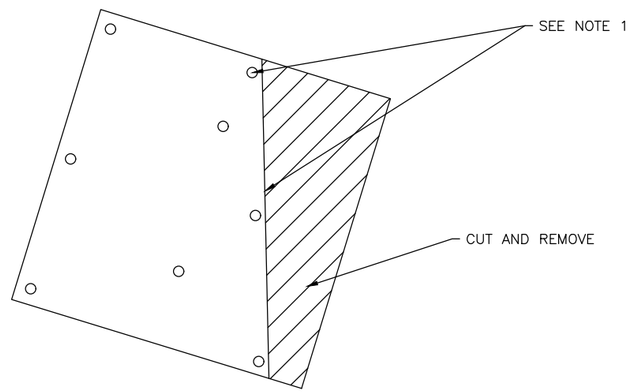
SUMMARY TABLES

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395549\00645_D-D4 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E1	E8

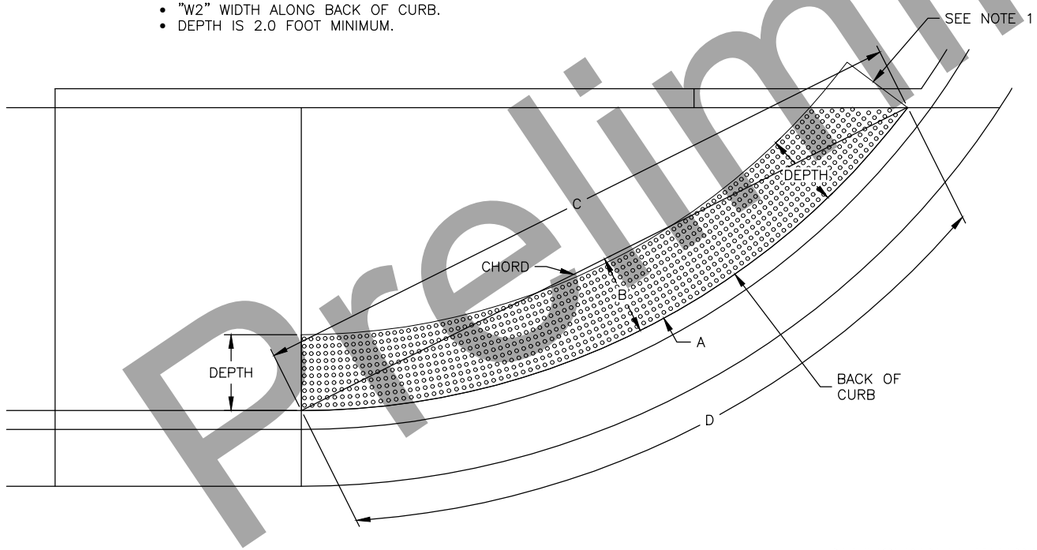


CURB RAMP NOTES:

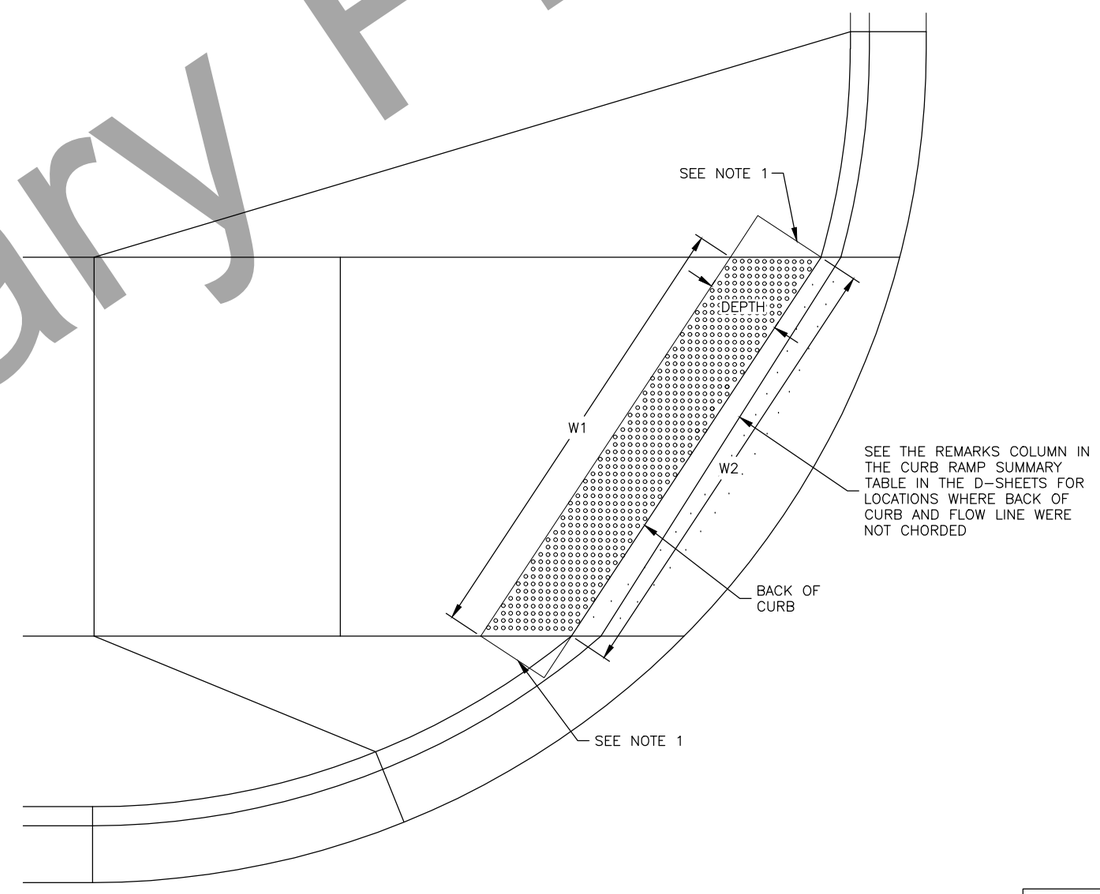
1. CONSTRUCT RAMP RUNS, FLARES, AND BOTH UPPER AND LOWER LANDING OF 6 INCH (MINIMUM) THICK CONCRETE, REGARDLESS OF WHETHER THE SIDEWALK IS ASPHALT OF CONCRETE. PROVIDE A COARSE BROOM FINISH RUNNING:
   - 1.1. PERPENDICULAR TO THE CURB ON RAMP RUNS, UPPER LANDINGS, AND PARALLEL TO THE CURB ON LOWER LANDINGS AND FLARES FOR DIRECTIONAL AND PARALLEL CURB RAMPS.
   - 1.2. PARALLEL TO THE CURB ON RAMP RUNS AND FLARES FOR PERPENDICULAR CURB RAMPS.
2. NOTIFY THE ENGINEER PRIOR TO CONCRETE PLACEMENT IF MAXIMUM OR MINIMUM GRADES CANNOT BE CONSTRUCTED. UNLESS PREVIOUSLY APPROVED BY THE ENGINEER, ANY FEATURE EXCEEDING MINIMUM OR MAXIMUM ALLOWABLE SLOPES WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
3. TRANSITION PANEL(S): WHEN CONNECTING INTO EXISTING SIDEWALK, REPLACE ADJACENT SIDEWALK PANEL(S) LABELED AS TRANSITION PANEL(S), AS REQUIRED FOR CROSS SLOPE TRANSITION FROM THE EXISTING SIDEWALK TO THE NEW UPPER LANDING TO ENSURE THE UPPER LANDING IS CONSTRUCTED WITH A COMPLIANT CROSS SLOPE. THE MAXIMUM TRANSITION PANEL(S) LENGTH IS 15.0 FEET.
4. RAMP RUN LENGTH: SURVEY PRIOR TO CONSTRUCTION TO VERIFY RAMP RUN LENGTH REQUIRED FOR COMPLIANT SLOPES. ADJUST THE RAMP RUN LENGTH AS NEEDED TO ENSURE COMPLIANT RAMP RUN RUNNING SLOPE. THIS SURVEY IS SUBSIDIARY TO 642 PAY ITEMS. RAMP RUN LENGTHS SHOULD BE 8.3% MAXIMUM (5.0% MINIMUM), BUT ARE NOT REQUIRED TO EXCEED 15.0 FEET.
5. JOINTS: INSTALL CONTINUOUS MINIMUM 6 INCH DEEP 1/2" EXPANSION JOINT AT ALL LOCATIONS WHERE SIDEWALK, CURB RAMP, OR CURB AND GUTTER (ANY TYPE) MEET. SEAL ALL EXPANSION JOINTS WITH HOT POURED ELASTIC TYPE JOINT SEAL CONFORMING TO SPECIFICATIONS 705-2.02 JOINT SEALANT. EXPANSION AND DUMMY JOINTS IN THE SIDEWALK AND CURB RAMP SHALL LINE UP WITH EXPANSION AND DUMMY JOINTS IN THE CURB AND GUTTER.
6. SEE SPECIFICATION SECTION 608-3.01 FOR WELDED WIRE FABRIC (WWF).

DETECTABLE WARNING TILE NOTES:

1. DETECTABLE WARNING TILE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. WHEN THE END TILE IS CUT ON-SITE, NEW ANCHOR HOLES ARE TO BE DRILLED AND COUNTERSUNK ALONG THE CUT LINE. FOLLOW THE MANUFACTURER RECOMMENDATIONS FOR ON-SITE CUTTING PROCEDURES, HOLE SET-BACK AND SPACING DISTANCES, TOOLS FOR CUTTING, SETTING NEW ANCHOR HOLES SYSTEM, AND RECOATING OF SAWCUT LINES.
2. DETECTABLE WARNING TILE DIMENSIONS PROVIDED ARE PER DESIGN, AND NEED TO BE VERIFIED FOR POST-CONSTRUCTION DIMENSIONS OF CURB AND GUTTER. CONTRACTOR TO PROVIDE DETECTABLE WARNING TILE LAYOUT SHOP DRAWINGS PER LOCATION ILLUSTRATING INSTALLATION WITH A MAXIMUM 2.0 INCH SETBACK FROM BACK OF CURB AND EXTENDING THE FULL WIDTH OF THE CURB RAMP. DETECTABLE WARNING TILE INSTALLATION ON PARALLEL AND PERPENDICULAR CURB RAMPS MUST EXTEND THE FULL WIDTH OF THE CURB RAMP ON THE LEADING EDGE AND HAVE A MAXIMUM 2.0 INCH GAP FROM THE CURB RAMP EDGE AT THE BACK OF CURB.
3. SEE CURB RAMP SUMMARY TABLE IN THE D-SHEETS FOR DIMENSIONS.
4. DETECTABLE WARNING TILE KEY DIMENSIONS:
   - "A" RADIUS AT BACK OF CURB.
   - "B" MAXIMUM HEIGHT FROM THE RADIUS CHORD TO BACK OF CURB.
   - "D" ARC LENGTH AT BACK OF CURB.
   - "W1" WIDTH.
   - "W2" WIDTH ALONG BACK OF CURB.
   - DEPTH IS 2.0 FOOT MINIMUM.



RADIAL LAYOUT



CHORDED LAYOUT

DETECTABLE WARNING TILE LAYOUT OPTIONS AND KEY DIMENSIONS

NOTE: DRAWING NOT TO SCALE

DWT DETAILS & CURB RAMP GENERAL NOTES

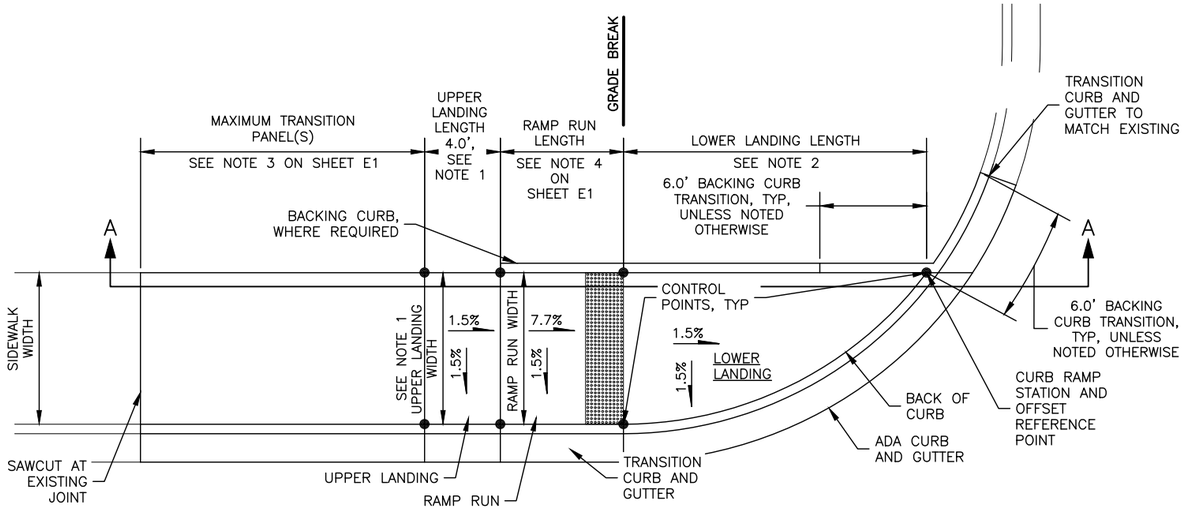
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E1 Thu, Jun/09/22 05:44am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E2	E8



CASE 1 – PLAN VIEW

GRADE BREAK TO BACK OF CURB IS LESS THAN OR EQUAL TO 5 FEET

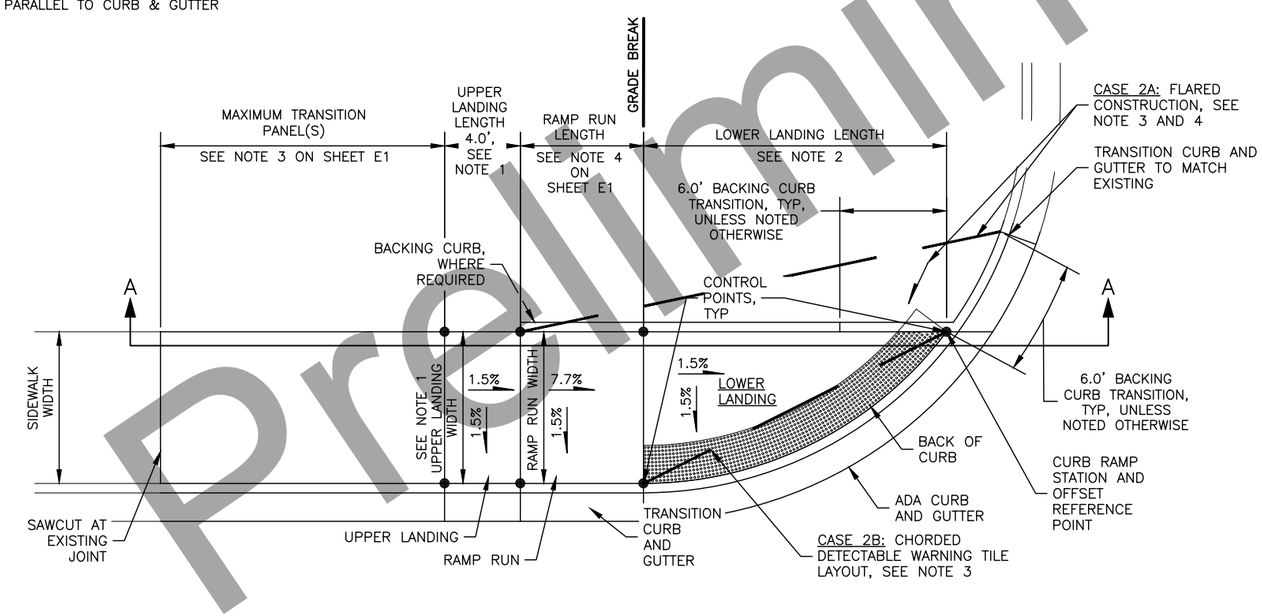
= DETECTABLE WARNING TILE

SLOPE DIRECTION KEY:

RUNNING SLOPE:
PARALLEL TO CURB & GUTTER

CROSS SLOPE:
PERPENDICULAR TO CURB & GUTTER

FLARE SLOPE:
PARALLEL TO CURB & GUTTER



CASE 2 – PLAN VIEW

GRADE BREAK TO BACK OF CURB IS MORE THAN 5 FEET

DIRECTIONAL CURB RAMP NOTES:

1. UPPER LANDING:

   1.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0–FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

   1.2 WIDTH: UPPER LANDING WIDTH SHALL MATCH OR EXCEED THE WIDTH OF THE RAMP RUN.

2. LOWER LANDING:

   2.1 LENGTH: LENGTH OF LOWER LANDING DEPENDS ON RAMP RUN WIDTH, BACK OF CURB TO SIDEWALK SEPARATION WIDTH, AND CURB RADII.
   2.2 RUNNING SLOPE: IN CASE 1, IF THE LOWER LANDING DOES NOT FUNCTION AS A TURNING SPACE, THE LOWER LANDING RUNNING SLOPE MAY BE INCREASED TO 5.0% AS APPROVED BY THE ENGINEER.

3. DETECTABLE WARNING TILE: DETECTABLE WARNING TILE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING. DETECTABLE WARNING TILE PLACEMENT ACROSS THE GRADE BREAK AND JOINTS IS PROHIBITED. ALIGN TRUNCATED DOME PATTERN IN THE PREDOMINANT DIRECTION DIRECTION OF WHEELCHAIR TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

   3.1 CASE 1: (GRADE BREAK TO BACK OF CURB IS LESS THAN OR EQUAL TO 5 FEET). PLACE THE DETECTABLE WARNING TILEBEHIND THE GRADE BREAK.
   3.2 CASE 2: (GRADE BREAK TO BACK OF CURB IS GREATER THAN 5 FEET). PLACE A RADIAL DETECTABLE WARNING TILE AT THE BACK OF CURB WITH MAXIMUM GAP OF 2 INCHES.
      3.2.1 CASE 2A: (FLARED CONSTRUCTION). PLACE DETECTABLE WARNING TILE AT THE BACK OF CURB REGARDLESS OF THE GRADE BREAK TO BACK OF CURB DISTANCE. DETECTABLE WARNING TILE IS RADIAL OR CHORDED PER 3.2.2.
      3.2.2 CASE 2B: (DETECTABLE WARNING TILE IS CHORDED). CURB RADII MAY BE CONVERTED TO A CHORD AT RAMP TERMINUS TO MAINTAIN A MAXIMUM GAP OF 2 INCHES FROM BACK OF CURB. MAXIMUM GUTTER PAN WIDENING PERMITTED IS UP TO 9 INCHES. SURFACE WATER MUST CONTINUE TO FLOW ALONG FLOW LINE.

4. FLARED CONSTRUCTION: FLARE RUNNING SLOPE IS 8.3% NOMINAL (10.0% MAXIMUM).

5. CONSTRUCT GRADE BREAKS PERPENDICULAR TO RAMP RUNS.

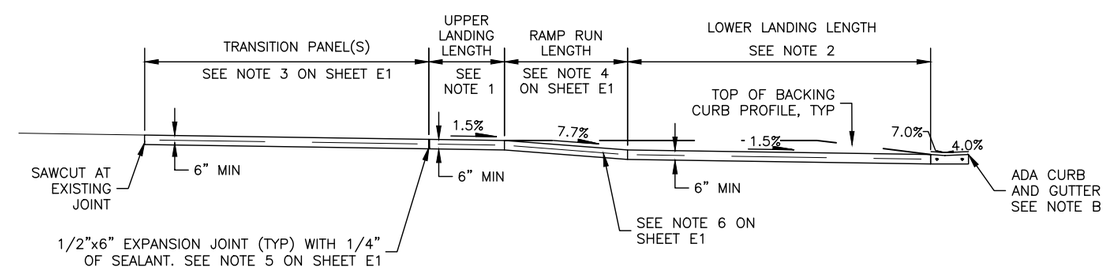
6. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

	NOMINAL**	MINIMUM	MAXIMUM**
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
UPPER LANDING CROSS SLOPE	1.5%	*	2.0%
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
RAMP RUN CROSS SLOPE	1.5%	*	2.0%
LOWER LANDING RUNNING SLOPE	1.5%	*	2.0%
LOWER LANDING CROSS SLOPE	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.

** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).



PROFILE A–A

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. DESIGN SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

NOTE: DRAWING NOT TO SCALE

DIRECTIONAL CURB RAMP DETAILS

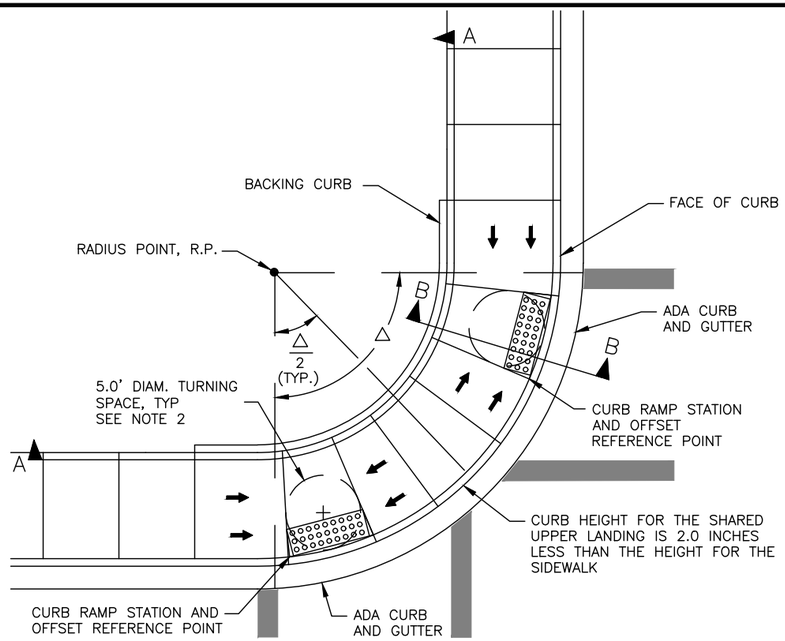
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

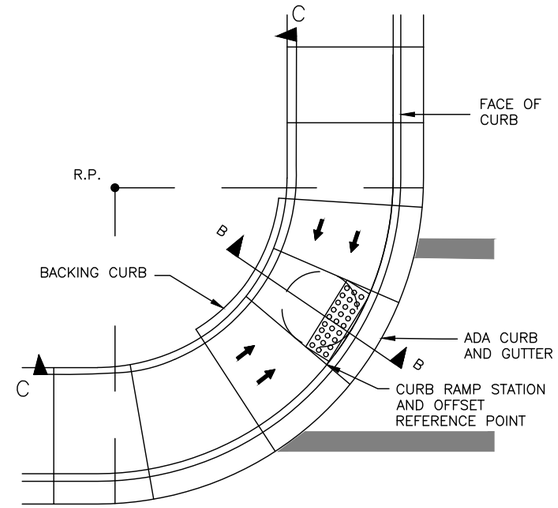
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E2 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E3	E8



TWO CROSSING DIRECTIONS



ONE CROSSING DIRECTION

PARALLEL CURB RAMP NOTES:

1. UPPER LANDING:

   1.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0 FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF UPPER LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER. SHARED UPPER LANDING LENGTH MAY NOT BE DECREASED.

   1.2 WIDTH: THE WIDTH OF ALL UPPER LANDINGS SHALL MATCH OR EXCEED THE WIDTH OF THE ADJACENT RAMP RUN.

2. LOWER LANDING: ENSURE LOWER LANDING HAS A 5.0 FOOT DIAMETER TURNING SPACE.
3. WHEN ONE PARALLEL CURB RAMP WILL SERVE TWO DIRECTIONS, USE THE ONE CROSSING DIRECTION DETAIL AND REFER TO THE STRIPING PLANS FOR CROSSWALK LAYOUTS.
4. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

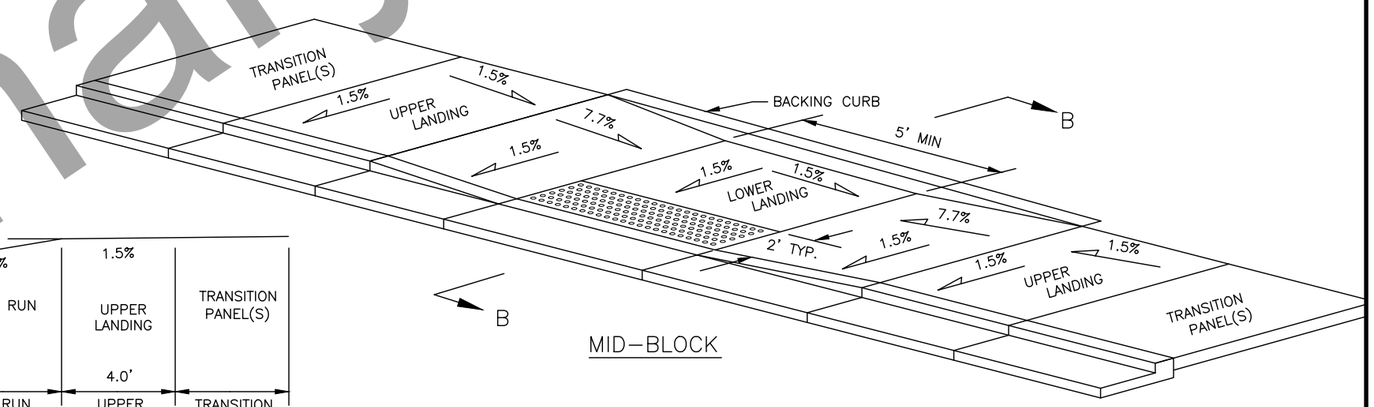
	NOMINAL**	MINIMUM	MAXIMUM**
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
LOWER LANDING RUNNING SLOPE	1.5%	*	2.0%
CROSS SLOPE	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.
** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).

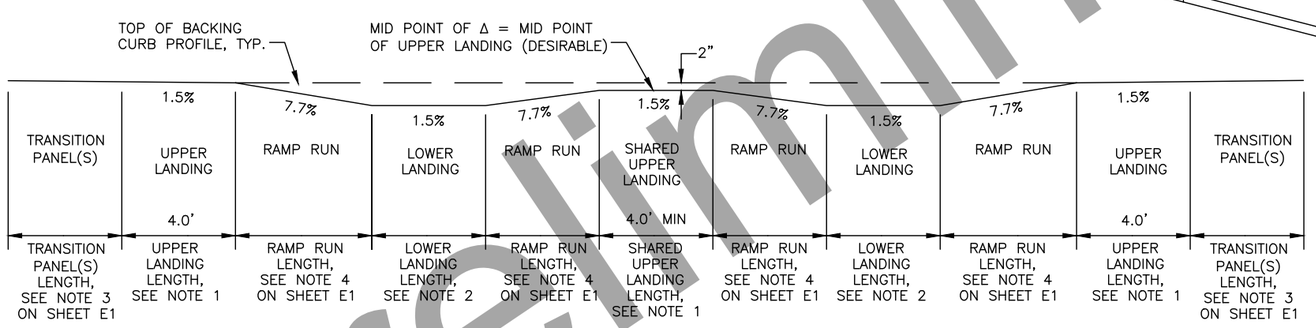
= DETECTABLE WARNING TILE

SLOPE DIRECTION KEY:
RUNNING SLOPE:
PARALLEL TO CURB & GUTTER

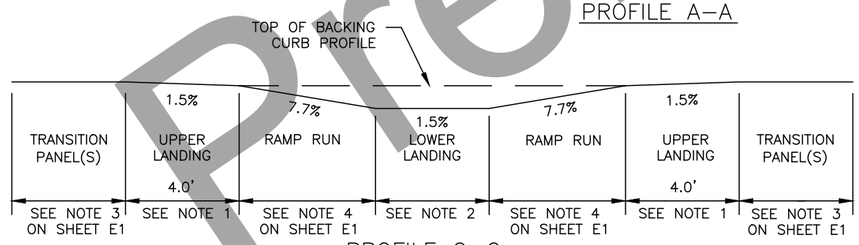
CROSS SLOPE:
PERPENDICULAR TO CURB & GUTTER



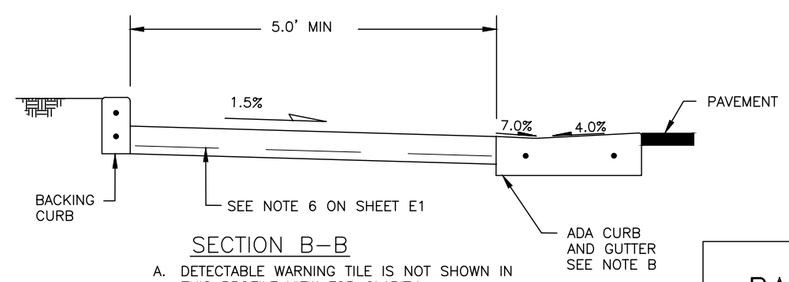
MID-BLOCK



PROFILE A–A



PROFILE C–C



SECTION B–B

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. DESIGN SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

NOTE: DRAWING NOT TO SCALE

PARALLEL CURB RAMP

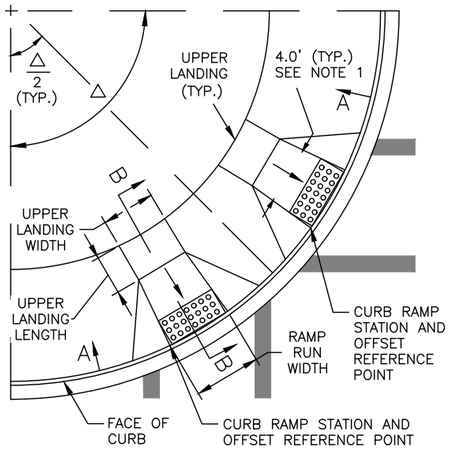
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

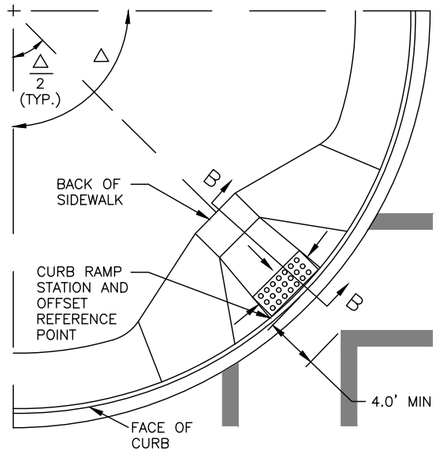
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E3 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

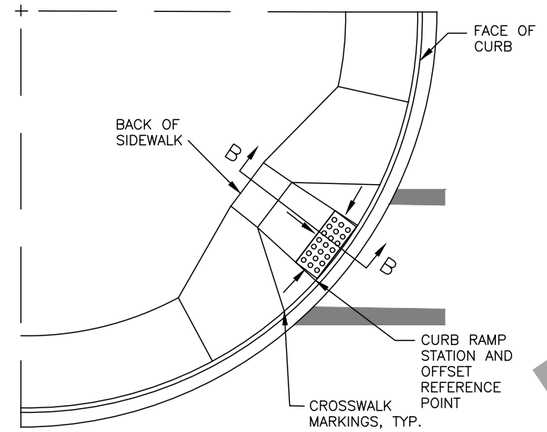
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E4	E8



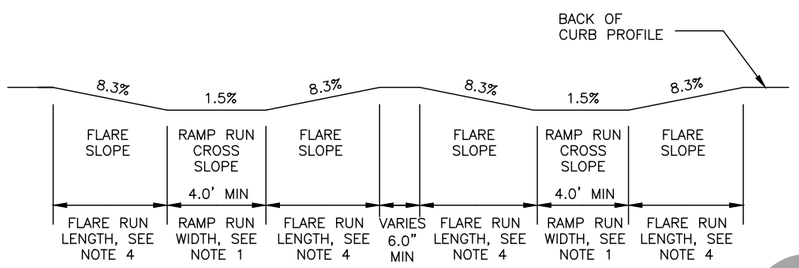
TWO CROSSING DIRECTIONS



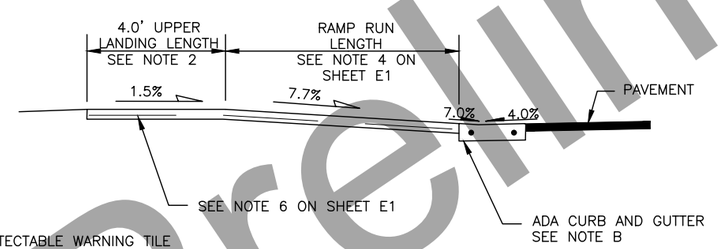
ONE RAMP – TWO DIRECTIONS



ONE CROSSING DIRECTION



PROFILE A–A



= DETECTABLE WARNING TILE

SECTION B–B

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. DESIGN SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

SLOPE DIRECTION KEY:

RAMP RUN RUNNING SLOPE:
PERPENDICULAR TO CURB & GUTTER

RAMP RUN CROSS SLOPE:
PARALLEL TO CURB & GUTTER

FLARE SLOPE:
PARALLEL TO CURB & GUTTER

UPPER LANDING CROSS SLOPE:
PARALLEL TO CURB AND GUTTER

UPPER LANDING RUNNING SLOPE:
PERPENDICULAR TO CURB AND GUTTER

PERPENDICULAR CURB RAMP NOTES:

1. RAMP RUN:

   1.1 WIDTH: CONSTRUCT RAMP RUN WIDTH TO 4.0 FEET. RAMP RUN WIDTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

2. UPPER LANDING:

   2.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0 FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF UPPER LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

   2.2 WIDTH: THE WIDTH OF ALL UPPER LANDINGS SHALL MATCH OR EXCEED THE WIDTH OF THE ADJACENT RAMP RUN.

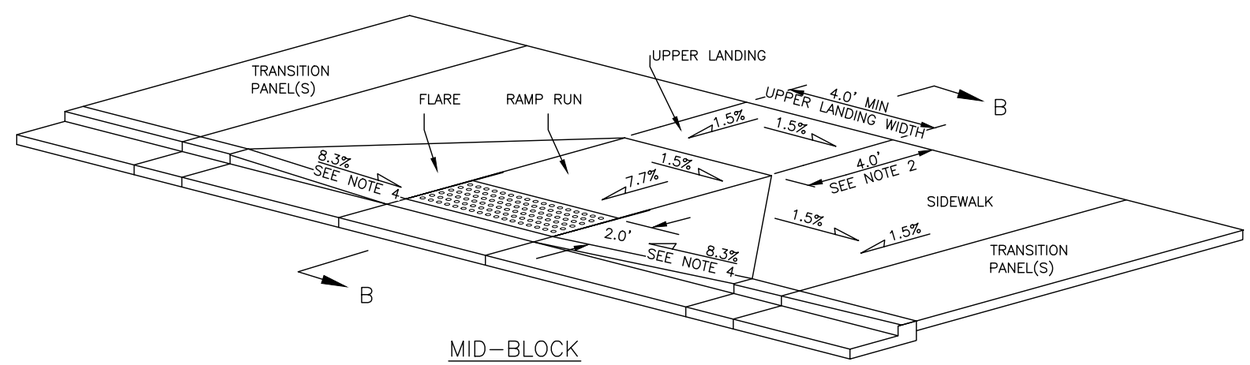
3. WHEN APPROVED BY THE ENGINEER, FLARES MAY BE REPLACED WITH A CURB AT LOCATIONS WHERE ACCESS TO THE SIDE OF A RAMP RUN IS BLOCKED BY POLES, UTILITY BOXES, OTHER OBSTRUCTIONS, OR BY A NON–ACCESSIBLE SURFACE SUCH AS A DIRT PLANTER STRIP. SEE STANDARD PLAN I–20 FOR DETAILS.

4. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

	NOMINAL**	MINIMUM	MAXIMUM**
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
FLARE SLOPE (IF UPPER LANDING)	8.3%	N/A	10.0%
FLARE SLOPE (NO UPPER LANDING)	7.7%	N/A	8.3%
UPPER LANDING CROSS SLOPE	1.5%	*	2.0%
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
ALL CROSS SLOPES	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.
** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).



MID–BLOCK

NOTE: DRAWING NOT TO SCALE

PERPENDICULAR CURB RAMP

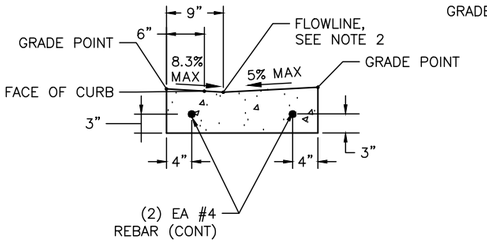
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

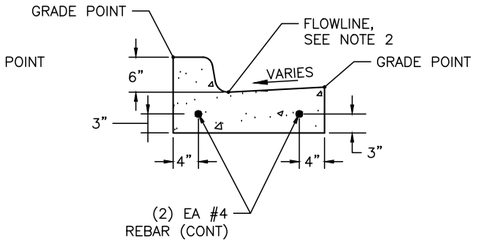
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E4 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

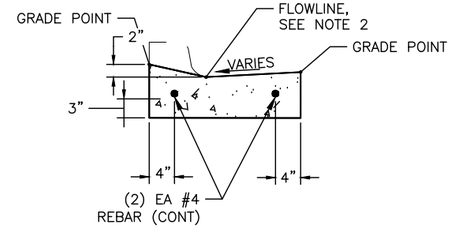
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E5	E8



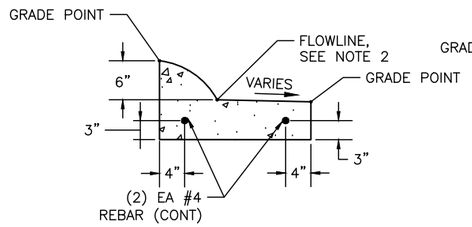
ADA CURB RAMP CURB AND GUTTER



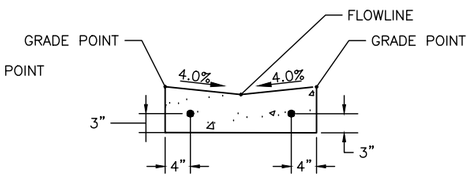
STANDARD CURB AND GUTTER



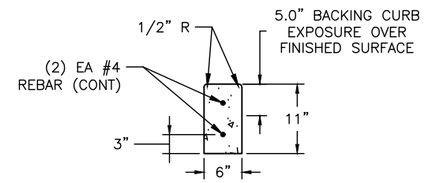
DEPRESSED CURB AND GUTTER



EXPRESSWAY CURB & GUTTER



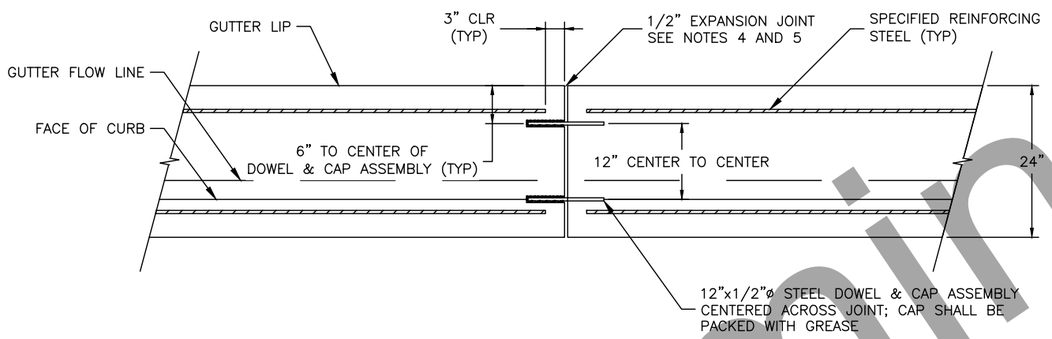
VALLEY GUTTER



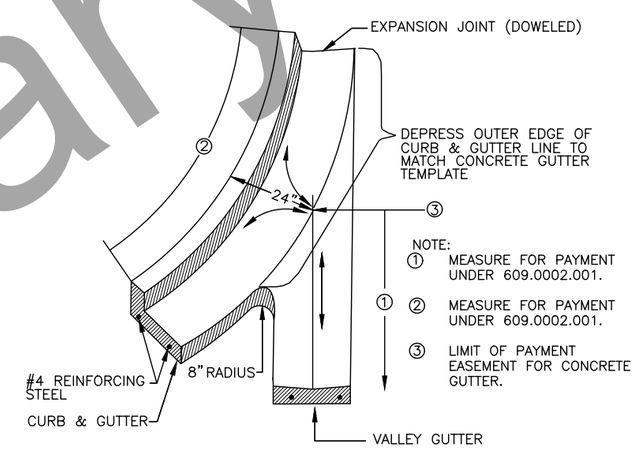
BACKING CURB

NOTE:

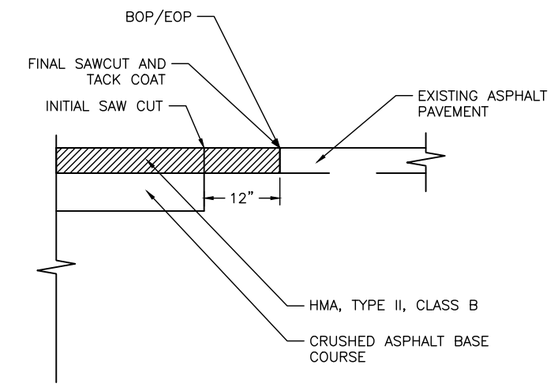
1. FOR CURB AND GUTTER DIMENSION NOT SHOWN, SEE ALASKA STANDARD PLANS DETAIL I-20.20.
2. GUTTER PAN SLOPE VARIES. FLOW LINE ELEVATION BASED OFF GRADE POINT AT TBC AND DIMENSIONS SHOWN IN DETAILS, UNLESS NOTED OTHERWISE ON THE G-SHEETS, FINISHED TOP BACK OF CURB TO FLOW LINE VERTICAL DROP SHALL BE:
   - 2.1. 6.0 INCH FOR STANDARD AND EXPRESSWAY CURB AND GUTTER.
   - 2.2. 2.0 INCH FOR DEPRESSED CURB AND GUTTER.
   - 2.3. 0.63 INCH (7.0% CURB SLOPE).
3. CONSTRUCT CONCRETE CURB AND GUTTER IN ACCORDANCE WITH THE DETAILS IN THESE PLANS AND THE REQUIREMENTS OF SECTION 609.
4. CONSTRUCT EXPANSION JOINTS AT A MAXIMUM 50 FOOT SPACING.
5. EXPANSION AND CONTRACTION JOINTS SHALL BE PERPENDICULAR TO THE CONCRETE CURB FACE.
6. APPLY JOINT SEALER EVENLY TO SEAL ALL EXPANSION JOINTS.
7. APPLY STE-1 TACK COAT BETWEEN CONCRETE SURFACES AND ADJOINING ASPHALT.
8. THE ENGINEER MAY ADJUST THE LOCATION OF EXPANSION OR CONTRACTION JOINTS.
9. PROTECT CONCRETE FROM DAMAGE DURING CURE. REPAIR OR REPLACE DAMAGED CONCRETE AS APPROVED BY THE ENGINEER.
10. SEE SPECIFICATION SECTION 609-3.02 FOR REINFORCEMENT STEEL BARS.



PLAN: CURB & GUTTER EXPANSION JOINT DETAIL



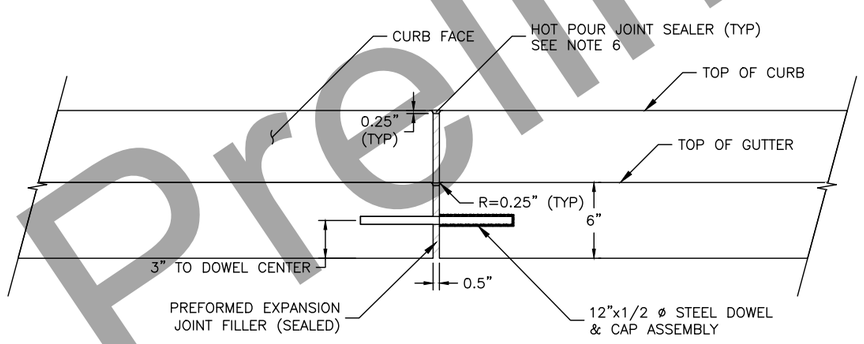
CURB & GUTTER TO VALLEY GUTTER DETAIL



NOTE:

SEE TYPICAL SECTION FOR MATERIAL DEPTHS

ASPHALT SAWCUT



ELEVATION: CURB & GUTTER EXPANSION JOINT DETAIL
(REINFORCING STEEL NOT SHOWN FOR CLARITY)

NOTE: DRAWING NOT TO SCALE

CURB AND ASPHALT SAWCUT DETAILS

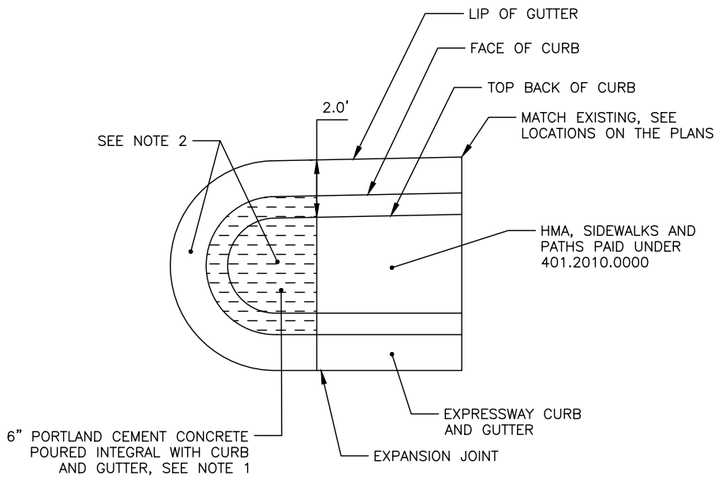
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

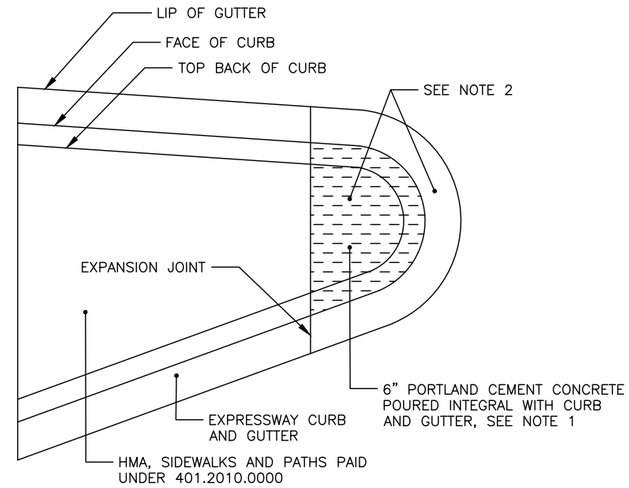
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E5 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E6	E8



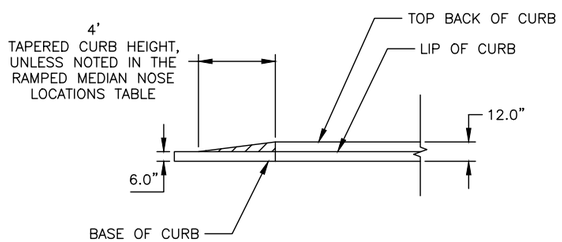
RAMPED MEDIAN NOSE – PLAN



ISLAND–RAMPED MEDIAN NOSE – PLAN

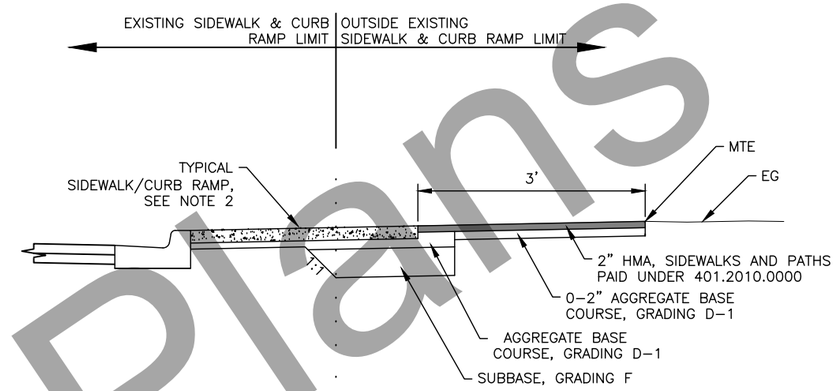
NOTES:

1. CONSTRUCT RAMPED MEDIAN NOSE OUT OF CLASS B PORTLAND CEMENT CONCRETE, SEE SPECIFICATION SECTION 550. CONSTRUCTION IS SUBSIDIARY TO CURB AND GUTTER 609.0002.0001 PAY ITEM.
2. MEDIAN NOSE PAINTING IS SUBSIDIARY TO 670.2000.0000 PAY ITEM. FOR MORE DETAILS AND INFORMATION ON PAINTING REFER TO THE SIGNING AND STRIPING SHEETS AND SPECS.
3. SEE RAMPED MEDIAN NOSE LOCATIONS TABLE. RADIUS POINT STATION AND OFFSET AND RADIUS IS FOR BACK OF CURB. THESE STATIONS AND OFFSETS ARE FOR CLARIFICATION PURPOSES AND NEED TO FIELD VERIFIED.

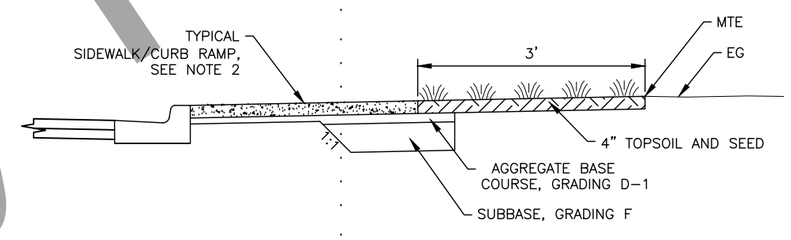


RAMPED MEDIAN NOSE – ELEVATION

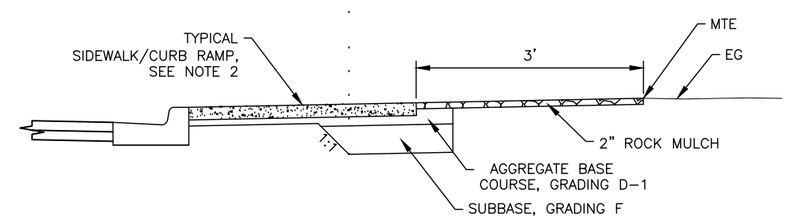
RAMPED MEDIAN NOSE LOCATIONS				
RADIUS POINT STATION	RADIUS POINT OFFSET	RADIUS	LOCATION DESCRIPTION	REMARKS
"CR" 30+03.36	47.33' LT	1.25'	ALONG COLLEGE ROAD, AT JOHANSEN EXPRESSWAY NORTHBOUND ON–RAMP, ISLAND	
"CR" 29+03.79	45.02' LT	2.25'	ALONG COLLEGE ROAD, AT JOHANSEN EXPRESSWAY NORTHBOUND ON–RAMP, ISLAND	TAPERED CURB HEIGHT IS LESS THAN 4.0', SEE G–SHEETS
"CR" 29+39.92	45.78' RT	1.50'	ALONG COLLEGE ROAD, AT JOHANSEN EXPRESSWAY NORTHBOUND OFF–RAMP, ISLAND	TAPERED CURB HEIGHT IS LESS THAN 4.0', SEE G–SHEETS
"CR" 29+42.94	2.63' RT	0.75'	ALONG COLLEGE ROAD, AT JOHANSEN EXRESSWAY, EASTBOUND THROUGH, MEDIAN	
"CR" 37+64.62	98.01' LT	0.35'	ALONG ILLINOIS STREET, SOUTHBOUND RIGHT TURN, ISLAND	
"CR" 37+48.54	0.36' RT	1.00'	ALONG COLLEGE ROAD, AT ILLINOIS STREET INTERSECTION, WESTBOUND THROUGH, MEDIAN	
"CR" 58+63.48	5.61' LT	1.46'	ALONG COLLEGE ROAD, AT CROSSOVER WAY INTERSECTION, WESTBOUND THROUGH, MEDIAN	
"CR" 59+84.64	6.39' RT	1.50'	ALONG COLLEGE ROAD, AT CROSSOVER WAY INTERSECTION, EASTBOUND THROUGH, MEDIAN	



ASPHALT AT BACK OF SIDEWALK



TOPSOIL & SEED AT BACK OF SIDEWALK



ROCK MULCH AT BACK OF SIDEWALK

NOTE:
1. BACK OF SIDEWALK MATERIAL LIMITS 3 FEET FROM BACK OF CURB/SIDEWALK/CURB RAMP, UNLESS NOTED OTHERWISE ON PLANS, NOT TO EXTEND PAST TCE OR ROW WHERE TCE DOES NOT EXIST.
2. SIDEWALK SHOWN FOR EXAMPLE, SEE SHEET B1 FOR SIDEWALK TYPICAL SECTION.

NOTE: DRAWING NOT TO SCALE

SIDEWALK DETAILS

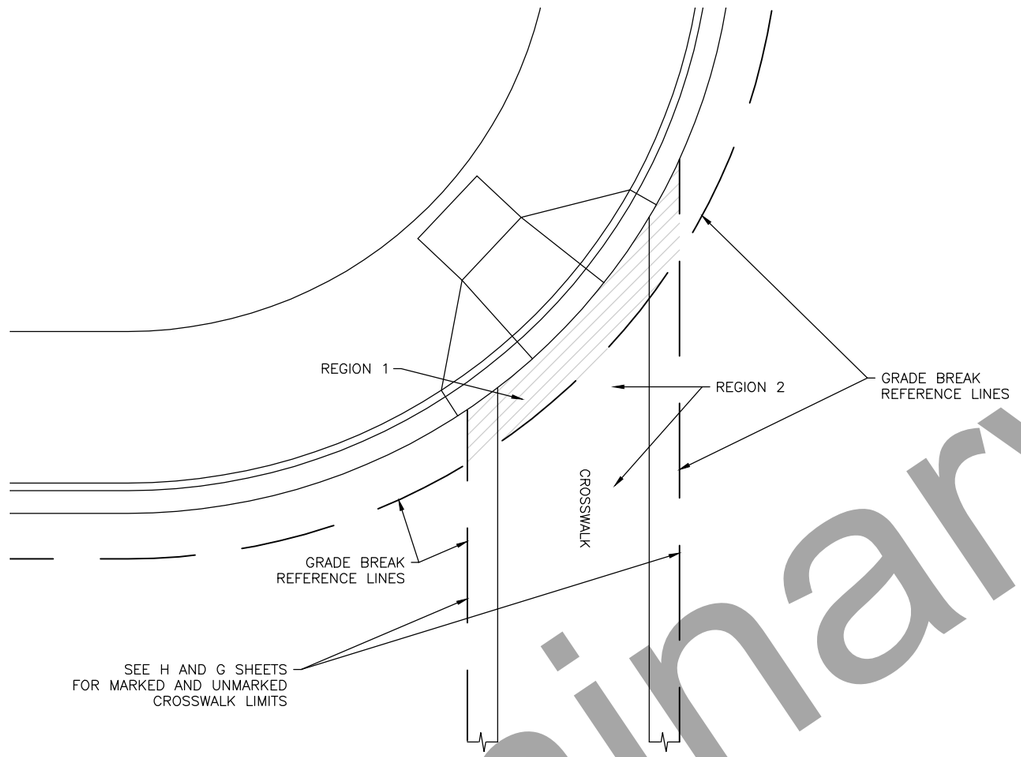
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

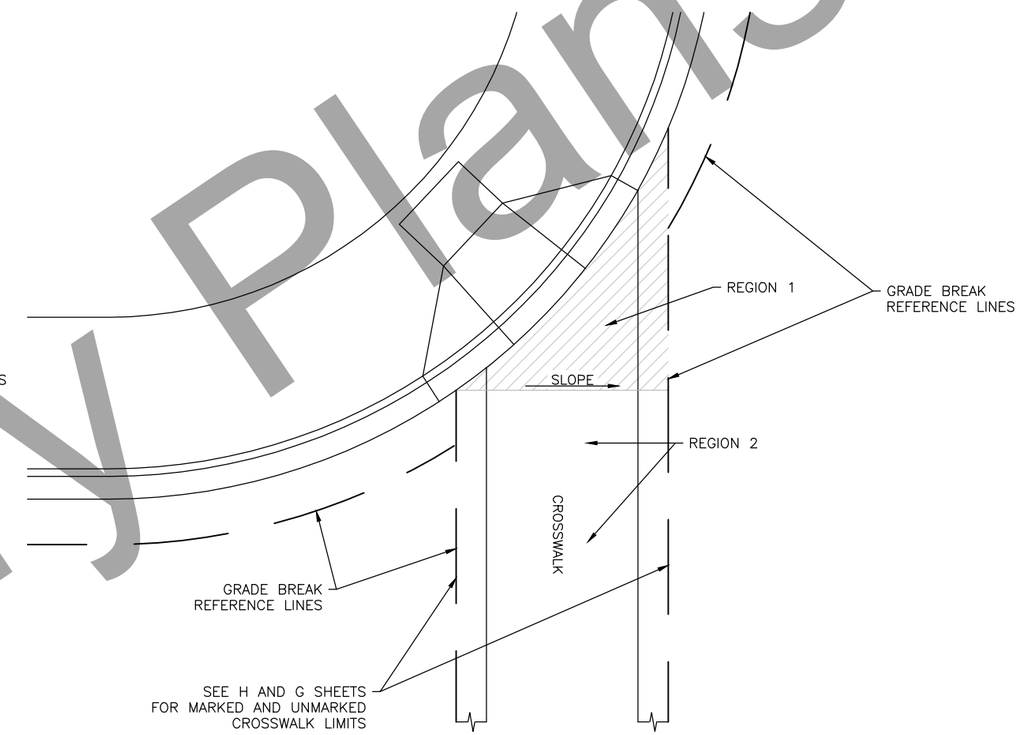
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E6 Thu, Jun/09/22 05:10am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	E7	E8





NOTES:
1) REGION 1: STRAIGHT GRADE NOT REQUIRED. SHALL MEET ADA STANDARDS.
2) REGION 2: STRAIGHT GRADE PERPENDICULAR TO THE PEDESTRIAN PATH, NO GRADE BREAKS ARE PERMITTED.
3) PERPENDICULAR RAMP SHOWN FOR EXAMPLE.

CROSSWALK GRADING DETAILS

NOTE: DRAWING NOT TO SCALE

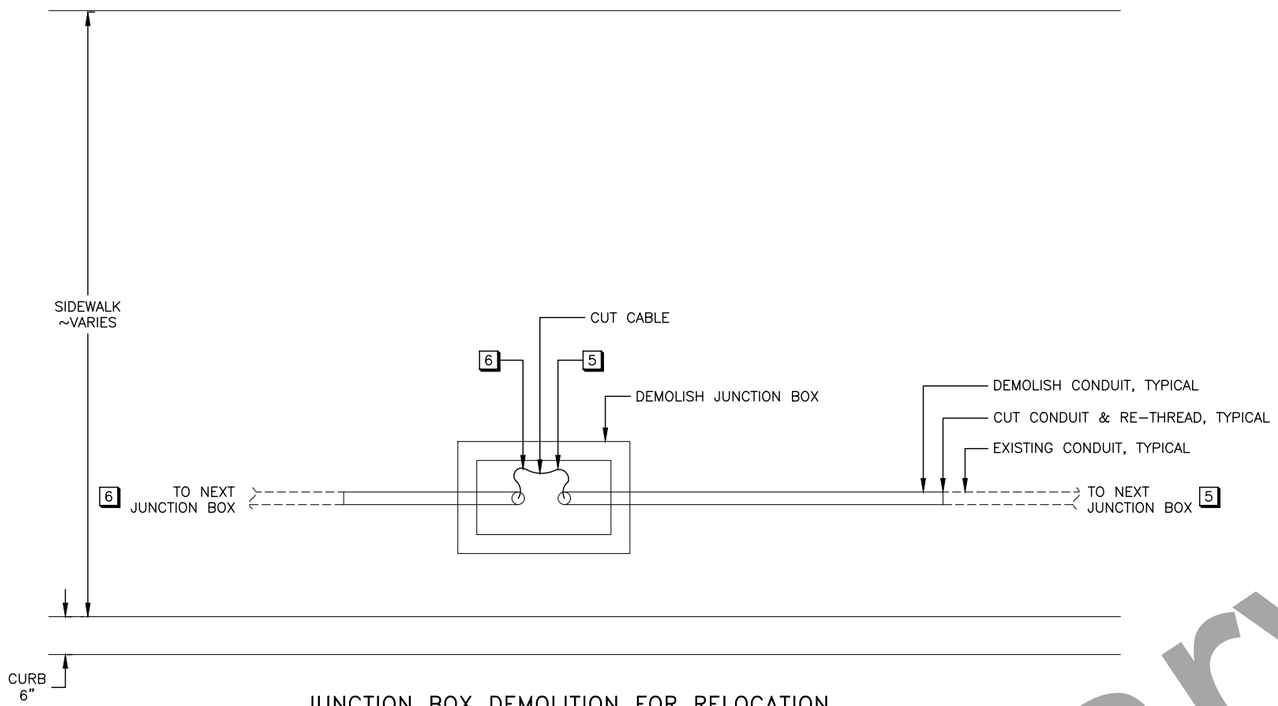
CROSSWALK GRADING DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

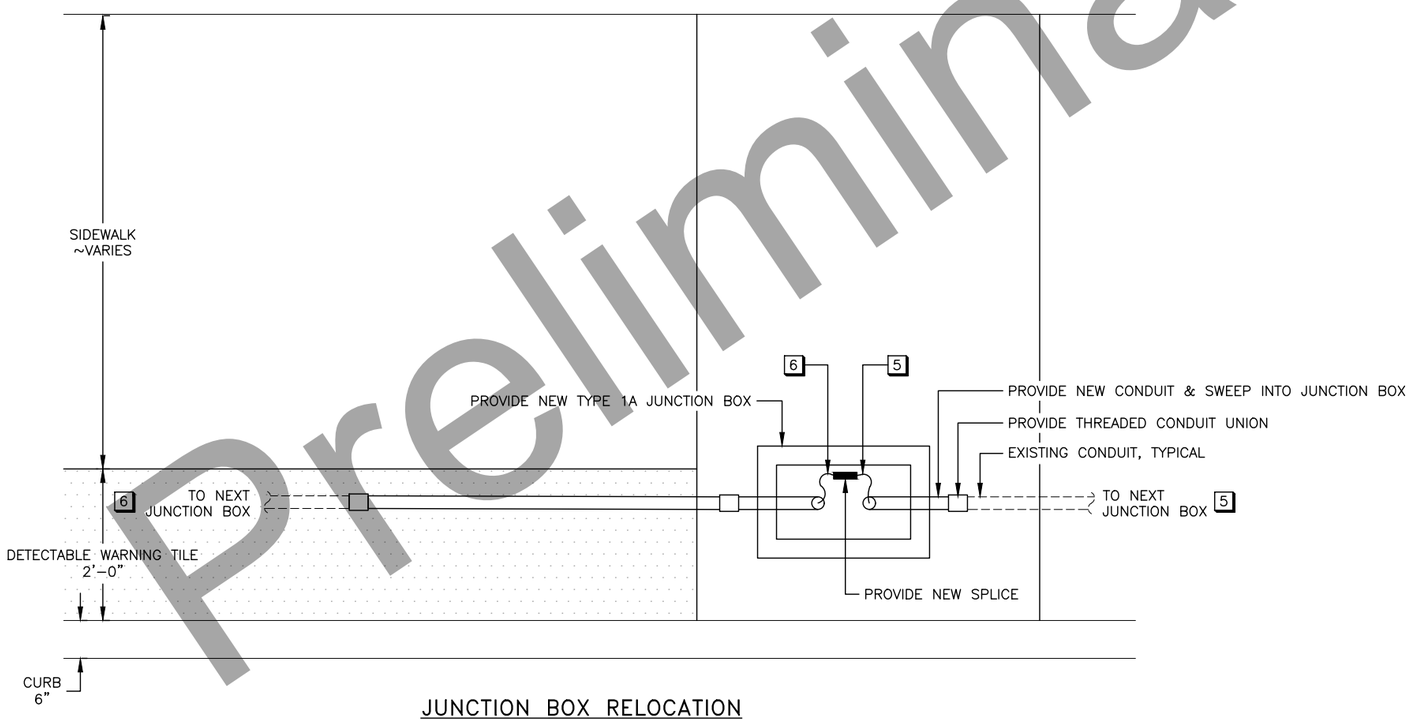
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395548\00645_E_DTL-E7 Thu, Jun/09/22 05:45am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0640013/NFHWY00645	2022	E8	E8



JUNCTION BOX DEMOLITION FOR RELOCATION

NTS



JUNCTION BOX RELOCATION

NTS

NOTES:

1. IN GENERAL, MOST JUNCTION BOXES WILL ONLY REQUIRE A VERTICAL ELEVATION ADJUSTMENT OR MINOR HORIZONTAL ADJUSTMENT. IN THESE CASES, THE JUNCTION BOXES SHALL BE ADJUSTED OR REPLACED (AS INDICATED ON THE PLAN SHEETS) WHILE PROTECTING THE EXISTING ELECTRICAL CONDUITS AND CABLES IN PLACE.

   WHERE A LARGE HORIZONTAL SHIFT IS REQUIRED, WHICH IMPACTS CONDUITS AND CABLES, THEN THE DETAIL ON THIS SHEET APPLIES. ALL OF THE CONDUIT AND CABLE MODIFICATIONS PROVIDED TO RELOCATE JUNCTION BOXES SHALL BE SUBSIDIARY TO THE ASSOCIATED JUNCTION BOX PAY ITEM.
2. WHERE JUNCTION BOXES ARE REPLACED OR ADJUSTED, THE REINSTALLATION SHALL COMPLY WITH ALASKA STANDARD PLAN L-23.02. NOTIFY THE ENGINEER IF REINSTALLATION OF JUNCTION BOX CONFLICTS WITH STANDARD PLAN. THE ENGINEER WILL REVIEW THESE INSTANCES ON A CASE-BY-CASE BASIS.
3. JUNCTION BOXES SHALL NOT BE LOCATED IN THE NEW DETECTABLE WARNING TILE NOR IN A GRADE BREAK.
4. THIS DETAIL SHOWS THE JUNCTION BOX MOVING TO THE RIGHT (PARALLEL TO THE ROAD). DEPENDING ON LOCATION OF THE DETECTABLE WARNING TILE OR GRADE BREAK AND CONFLICTING JUNCTION BOX, THE JUNCTION BOX MAY MOVE TO THE LEFT (PARALLEL TO THE ROAD). THE CONTRACTOR MAY ALTERNATIVELY SHIFT THE JUNCTION BOX IN ANOTHER DIRECTION WITH PRIOR APPROVAL BY THE ENGINEER.

5 ON THE SIDE WHERE THE REPLACEMENT JUNCTION BOX IS MOVING CLOSER TO THE NEXT ADJACENT JUNCTION BOX, THE EXISTING POWER CABLES & GROUNDING CONDUCTOR WILL HAVE EXCESS LENGTH. THE CONTRACTOR SHALL TEMPORARILY PULL BACK THE POWER CABLES & GROUNDING CONDUCTOR DURING CONDUIT MODIFICATION. AFTER CONDUIT MODIFICATION, PULL THE EXISTING POWER CABLES & GROUNDING CONDUCTOR BACK INTO THE JUNCTION BOX. TRIM EXCESS LENGTH AND PREP FOR SPLICING.

6 ON THE SIDE WHERE THE REPLACEMENT JUNCTION BOX IS MOVING AWAY FROM THE NEXT JUNCTION BOX, THE EXISTING POWER CABLES & GROUNDING CONDUCTOR WILL NOT BE LONG ENOUGH TO REACH THE REPLACEMENT BOX. THE CONTRACTOR SHALL REMOVE THE POWER CABLES & GROUNDING CONDUCTOR BACK TO THE NEXT BOX, PROVIDE NEW POWER CABLES & GROUNDING CONDUCTOR, SPLICE IN NEW CABLES AT THE NEXT BOX, AND THEN EXTEND TO THE RELOCATED JUNCTION BOX AND SPLICE.

7. NEW CONDUIT PROVIDED BY JUNCTION BOX RELOCATION SHALL MATCH EXISTING CONDUIT SIZE. THE CONTRACTOR SHALL ASSUME 2" RMC.
8. NEW POWER CABLES PROVIDED BY JUNCTION BOX RELOCATION SHALL MATCH EXISTING CABLE SIZE. THE CONTRACTOR SHALL ASSUME A (3c) #8 AWG CABLE.
9. NEW GROUNDING CONDUCTORS PROVIDED BY JUNCTION RELOCATION SHALL BE 8 AWG COPPER.
10. POWER CABLE SPLICES SHALL BE A PERMANENT, RESIN BASED SPLICE, LISTED FOR SUBMERGED APPLICATIONS. BASIS OF DESIGN IS 3M 'SCOTCHCAST, INLINE RESIN POWER CABLE SLICE KITS 82-A SERIES'.

JUNCTION BOX RELOCATION DETAIL

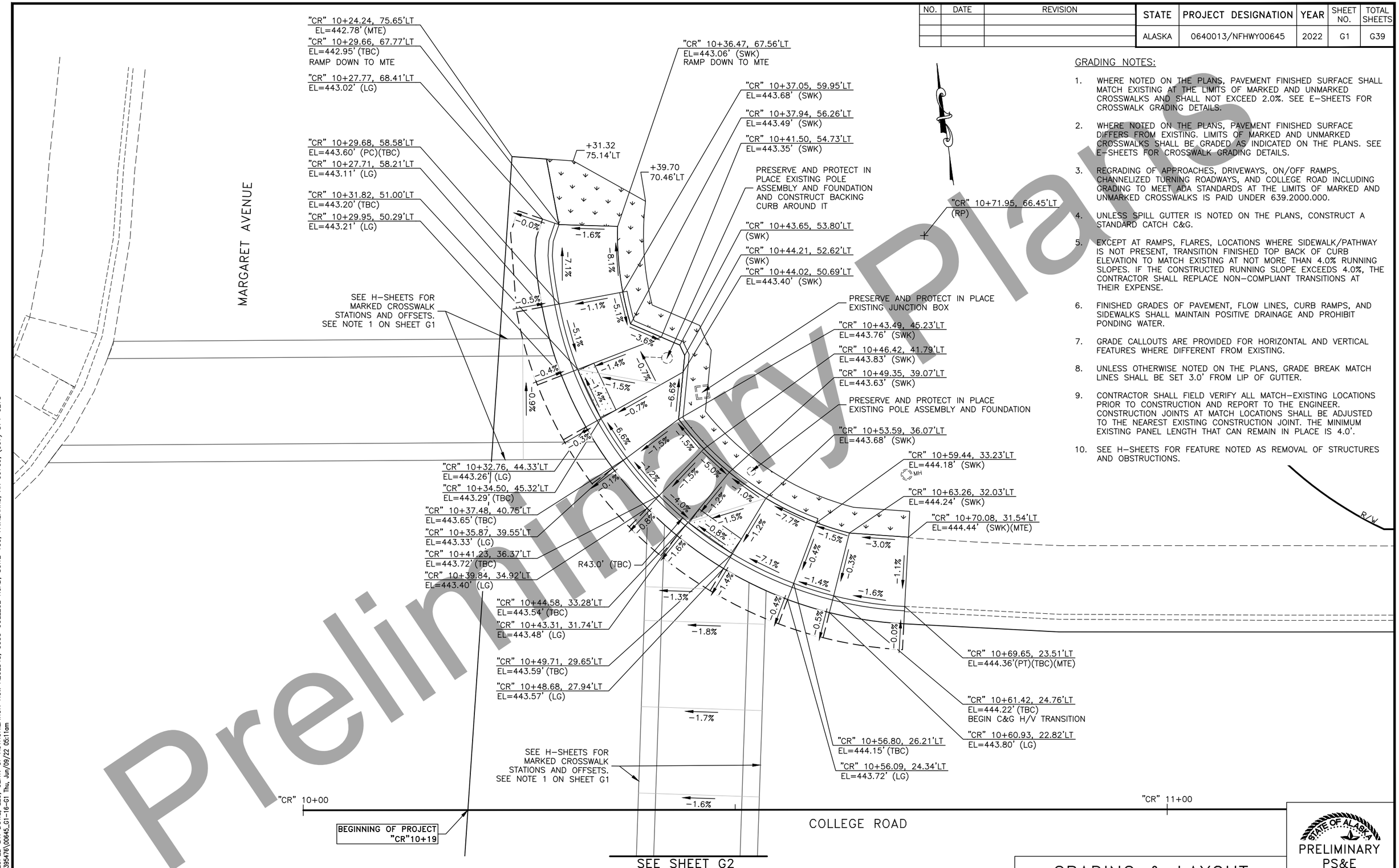
STATE OF ALASKA
PRELIMINARY
PS&E
03-JUN-2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DESIGN ALASKA, INC. AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
C:\Design Alaska AutoCAD 2020\backup\AcPublish_5200\00645_E_DA-E8 Fri, Jun/03/22 10:41am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G1	G39



GRADING NOTES:

1. WHERE NOTED ON THE PLANS, PAVEMENT FINISHED SURFACE SHALL MATCH EXISTING AT THE LIMITS OF MARKED AND UNMARKED CROSSWALKS AND SHALL NOT EXCEED 2.0%. SEE E-SHEETS FOR CROSSWALK GRADING DETAILS.
2. WHERE NOTED ON THE PLANS, PAVEMENT FINISHED SURFACE DIFFERS FROM EXISTING. LIMITS OF MARKED AND UNMARKED CROSSWALKS SHALL BE GRADED AS INDICATED ON THE PLANS. SEE E-SHEETS FOR CROSSWALK GRADING DETAILS.
3. REGRADING OF APPROACHES, DRIVEWAYS, ON/OFF RAMPS, CHANNELIZED TURNING ROADWAYS, AND COLLEGE ROAD INCLUDING GRADING TO MEET ADA STANDARDS AT THE LIMITS OF MARKED AND UNMARKED CROSSWALKS IS PAID UNDER 639.2000.000.
4. UNLESS SPILL GUTTER IS NOTED ON THE PLANS, CONSTRUCT A STANDARD CATCH C&G.
5. EXCEPT AT RAMPS, FLARES, LOCATIONS WHERE SIDEWALK/PATHWAY IS NOT PRESENT, TRANSITION FINISHED TOP BACK OF CURB ELEVATION TO MATCH EXISTING AT NOT MORE THAN 4.0% RUNNING SLOPES. IF THE CONSTRUCTED RUNNING SLOPE EXCEEDS 4.0%, THE CONTRACTOR SHALL REPLACE NON-COMPLIANT TRANSITIONS AT THEIR EXPENSE.
6. FINISHED GRADES OF PAVEMENT, FLOW LINES, CURB RAMPS, AND SIDEWALKS SHALL MAINTAIN POSITIVE DRAINAGE AND PROHIBIT PONDING WATER.
7. GRADE CALLOUTS ARE PROVIDED FOR HORIZONTAL AND VERTICAL FEATURES WHERE DIFFERENT FROM EXISTING.
8. UNLESS OTHERWISE NOTED ON THE PLANS, GRADE BREAK MATCH LINES SHALL BE SET 3.0' FROM LIP OF GUTTER.
9. CONTRACTOR SHALL FIELD VERIFY ALL MATCH-EXISTING LOCATIONS PRIOR TO CONSTRUCTION AND REPORT TO THE ENGINEER. CONSTRUCTION JOINTS AT MATCH LOCATIONS SHALL BE ADJUSTED TO THE NEAREST EXISTING CONSTRUCTION JOINT. THE MINIMUM EXISTING PANEL LENGTH THAT CAN REMAIN IN PLACE IS 4.0'.
10. SEE H-SHEETS FOR FEATURE NOTED AS REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

GRADING & LAYOUT DETAILS

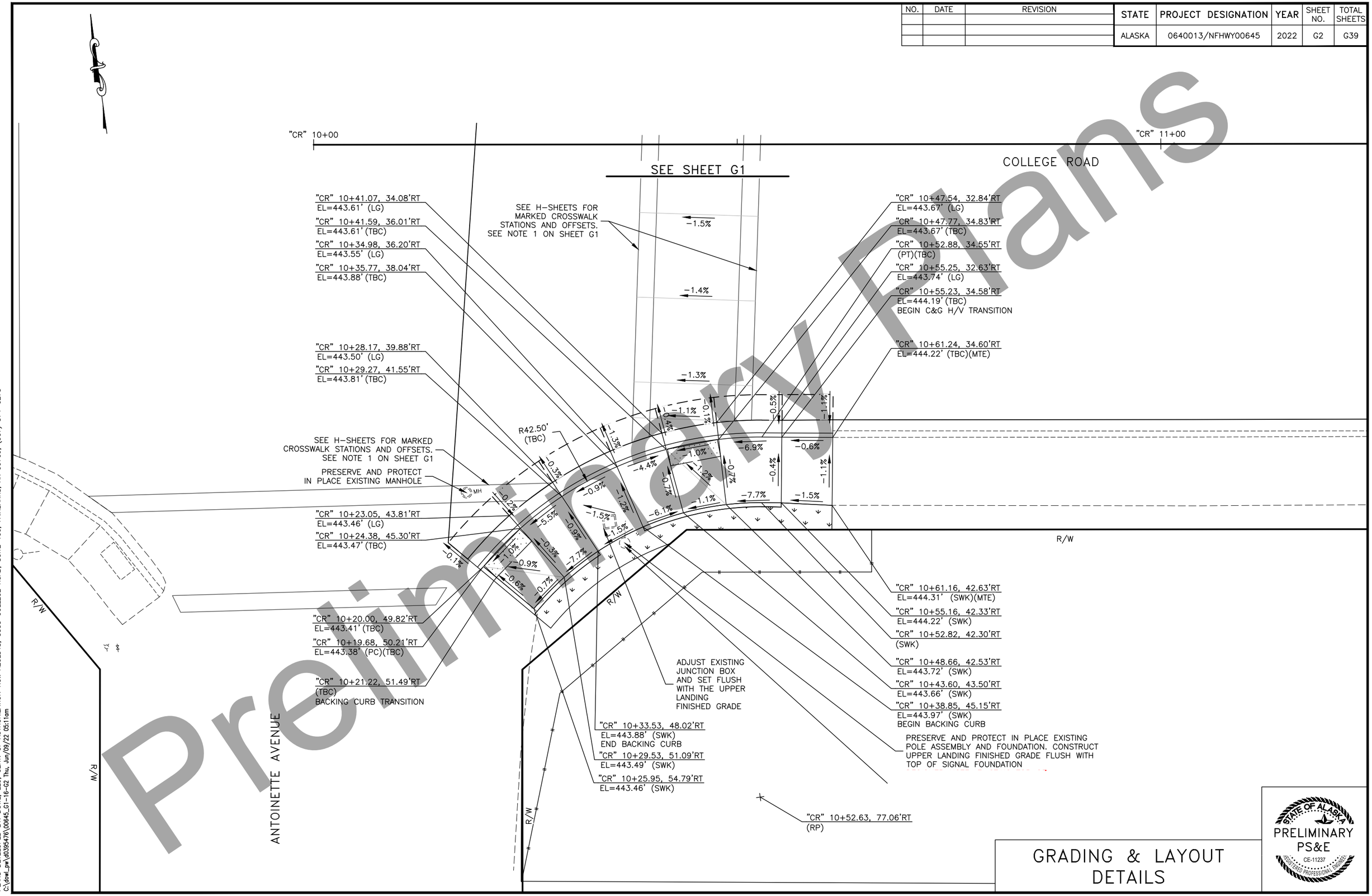
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G1 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G2	G39



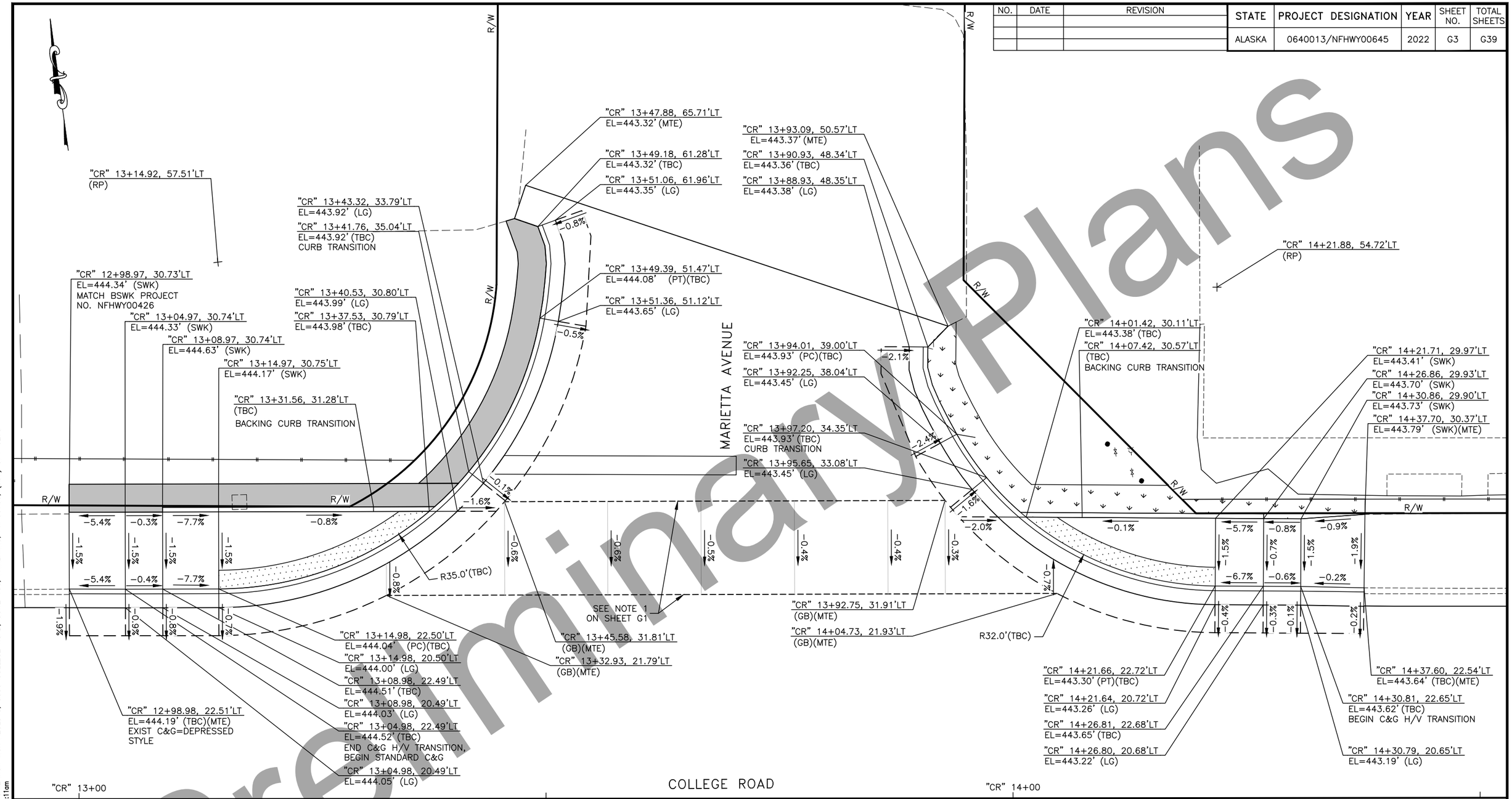
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\0395476\00645_G1-16-G2 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G3	G39



Preliminary Plans

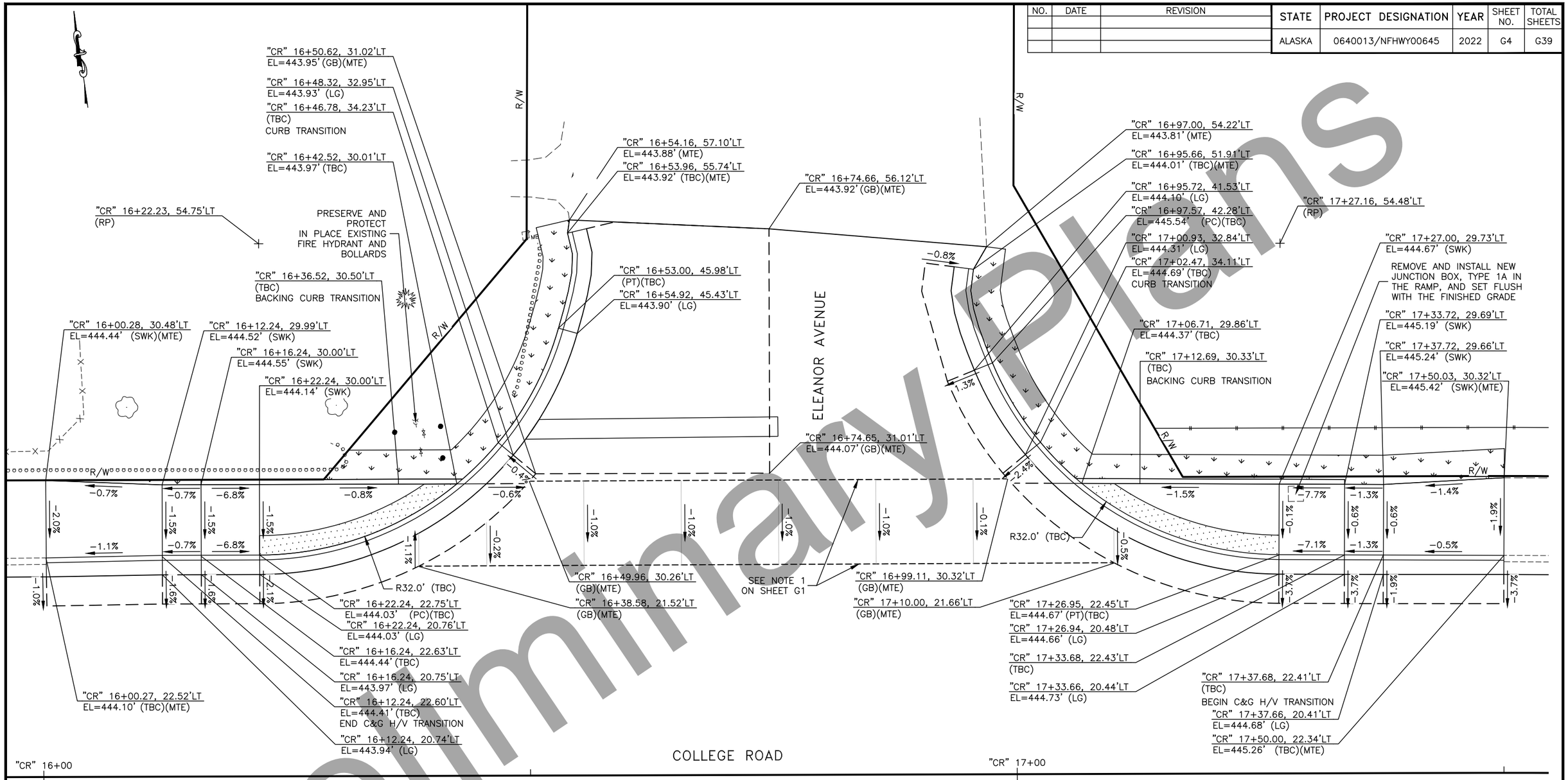
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d039547b\00645_G1-16-G3 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G4	G39



GRADING & LAYOUT DETAILS

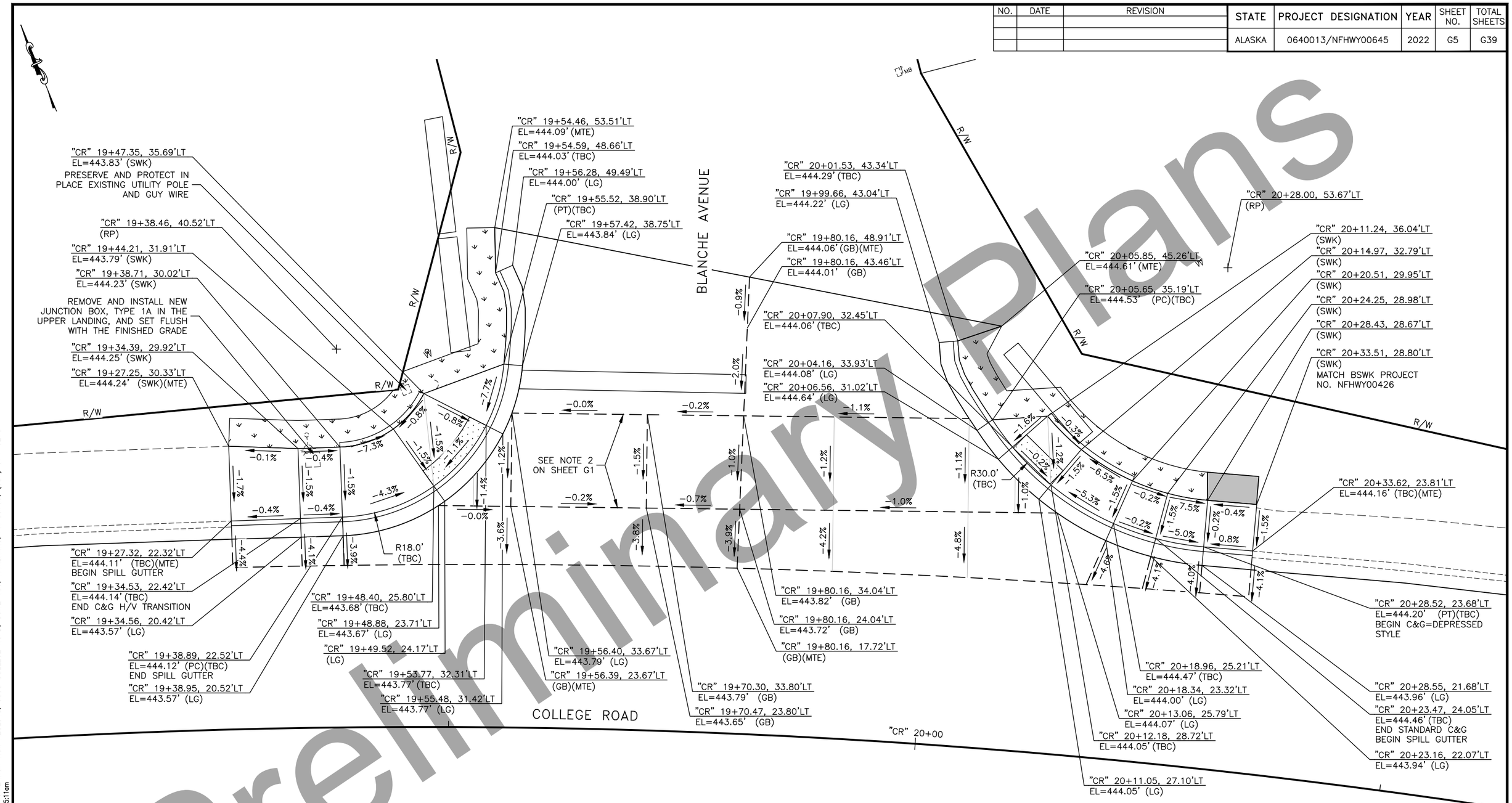
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G4 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G5	G39



GRADING & LAYOUT DETAILS

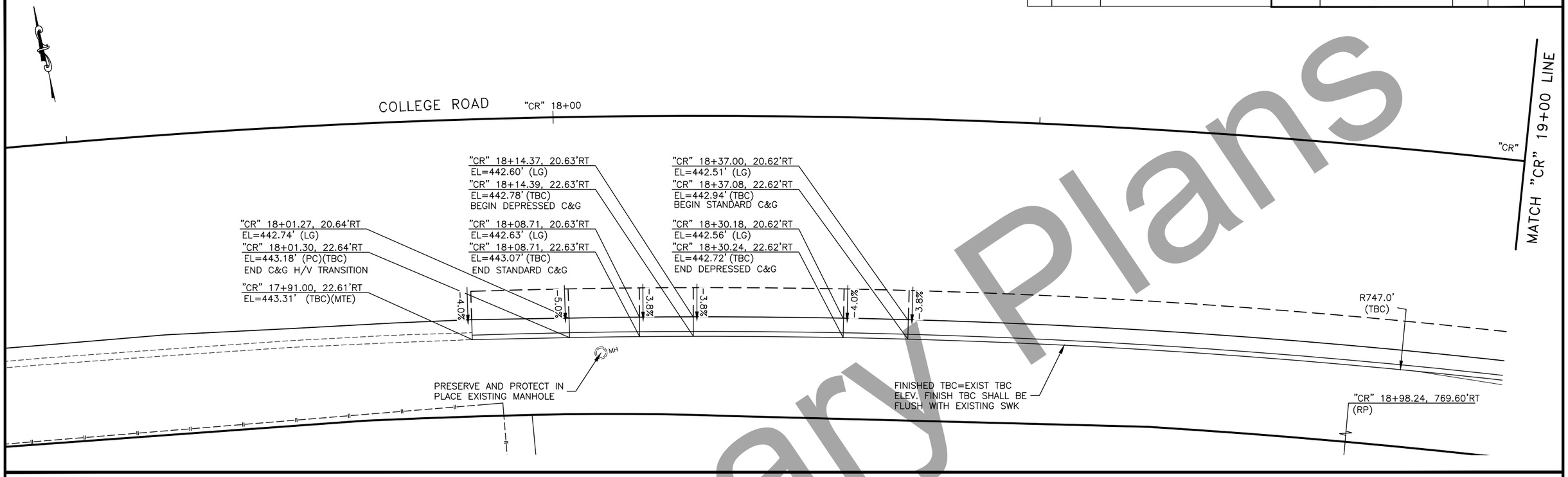
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

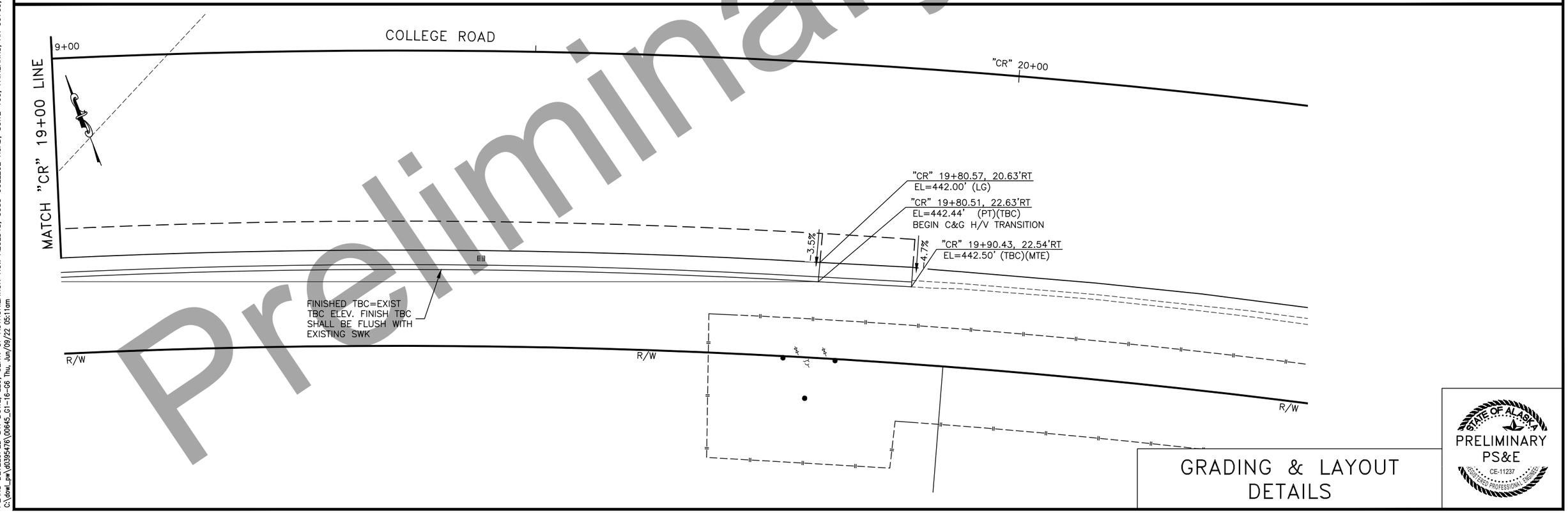
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G5 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G6	G39





GRADING & LAYOUT DETAILS

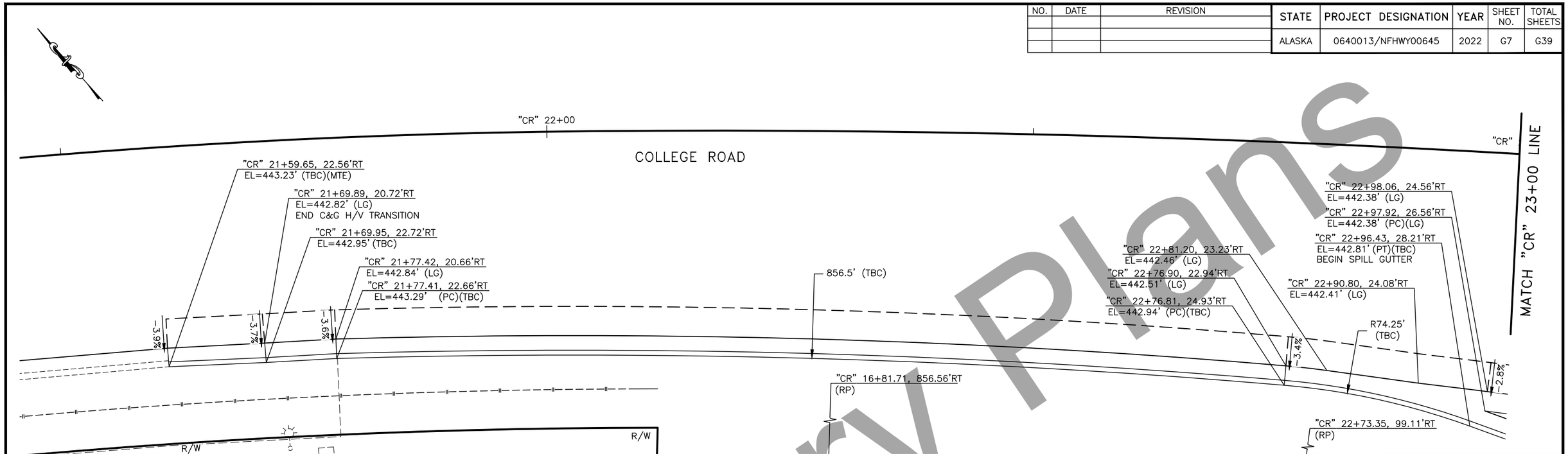
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
LICENSED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G6 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G7	G39



Preliminary Plans

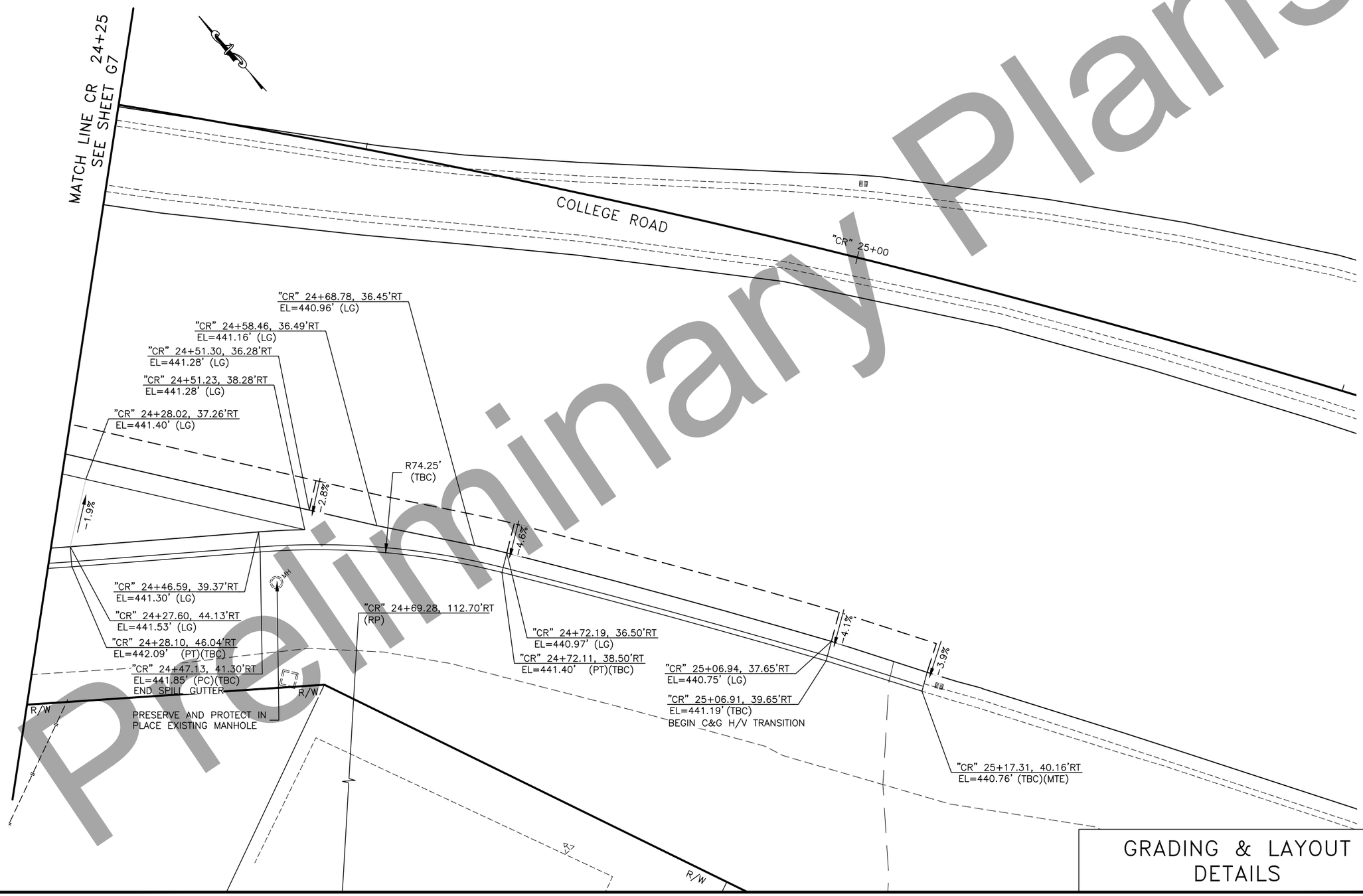
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G7 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G8	G39



Preliminary Plans

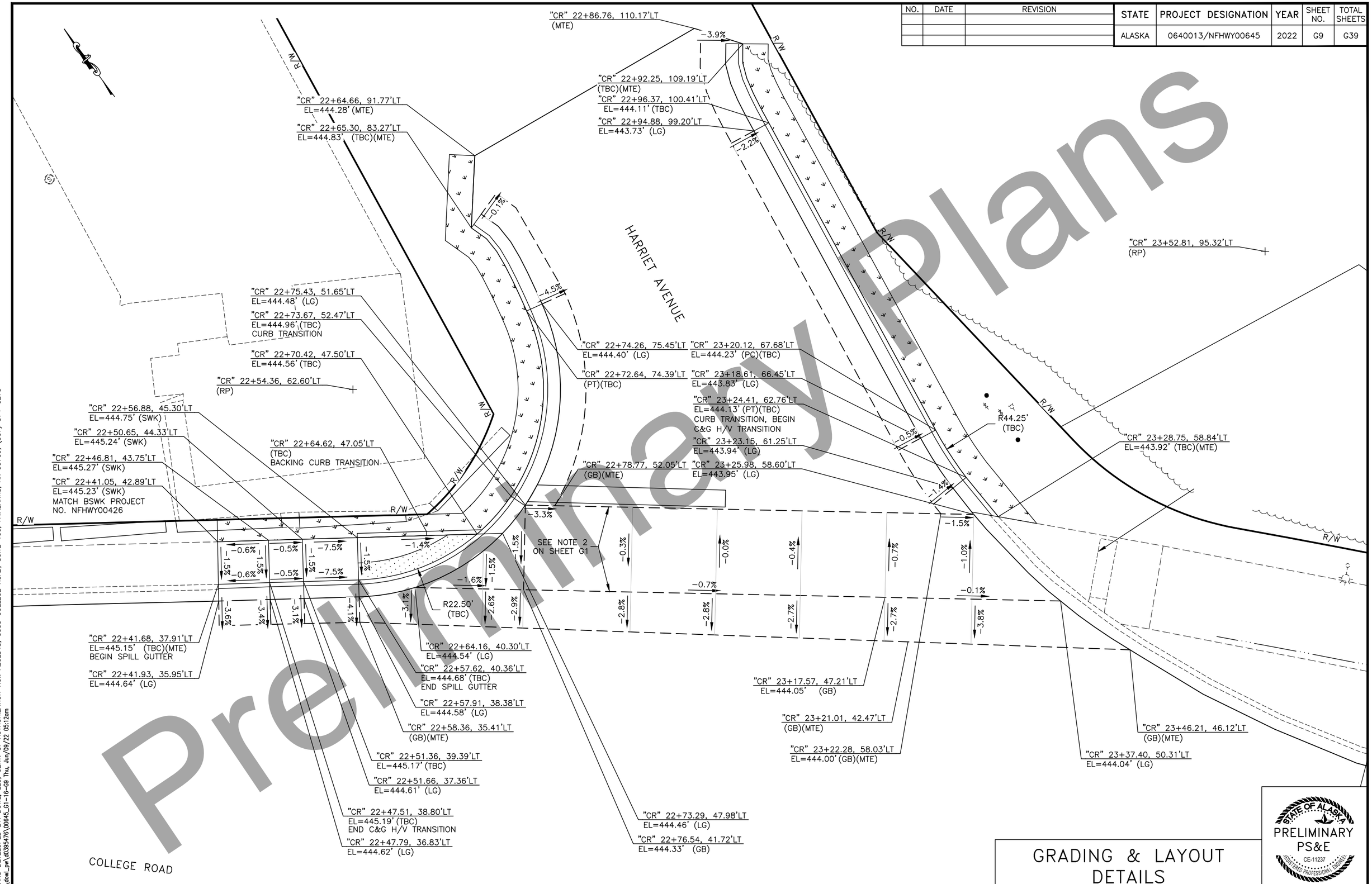
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-08 Thu, Jun/09/22 05:11am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G9	G39



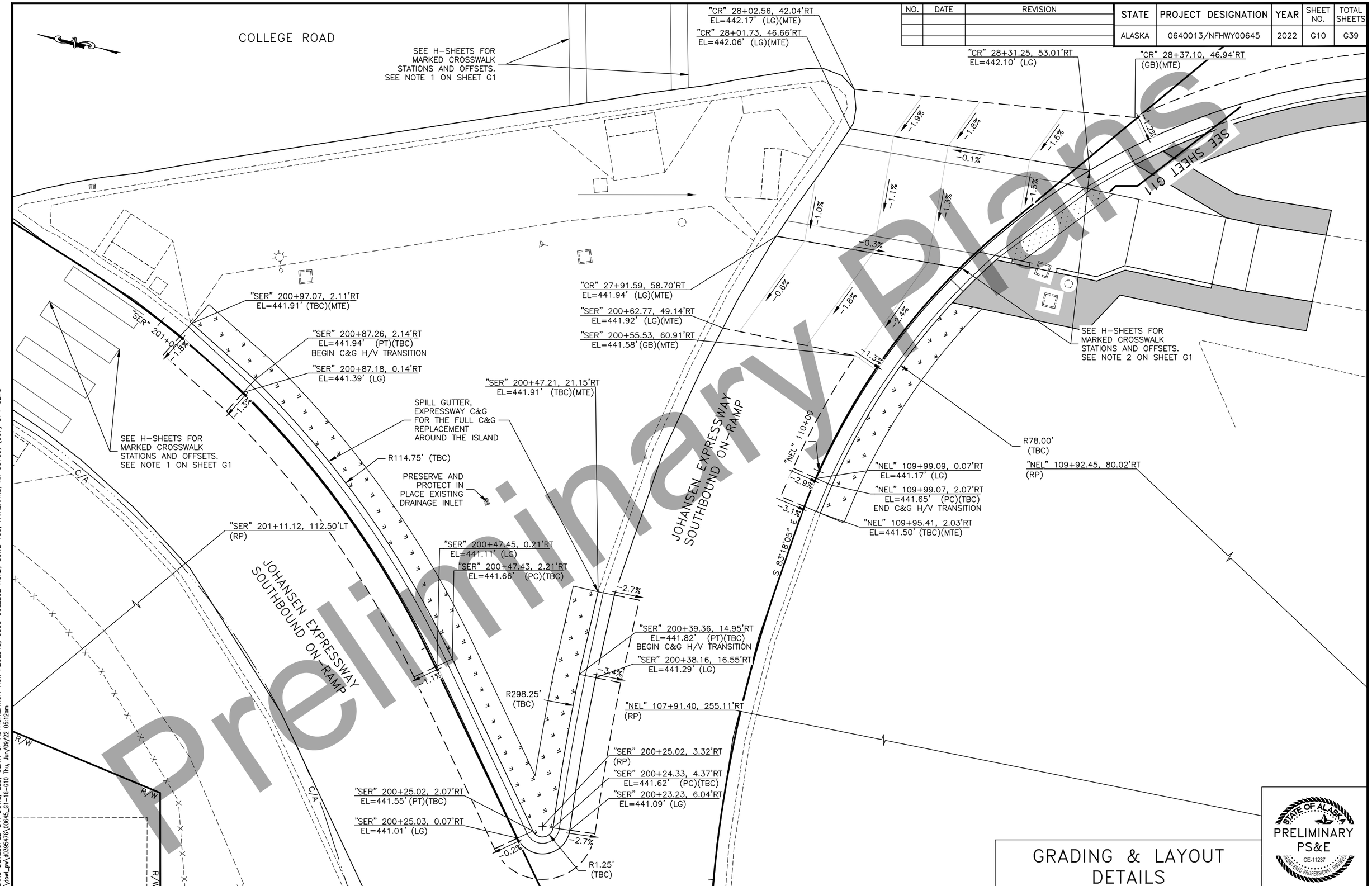
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G9 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G10	G39



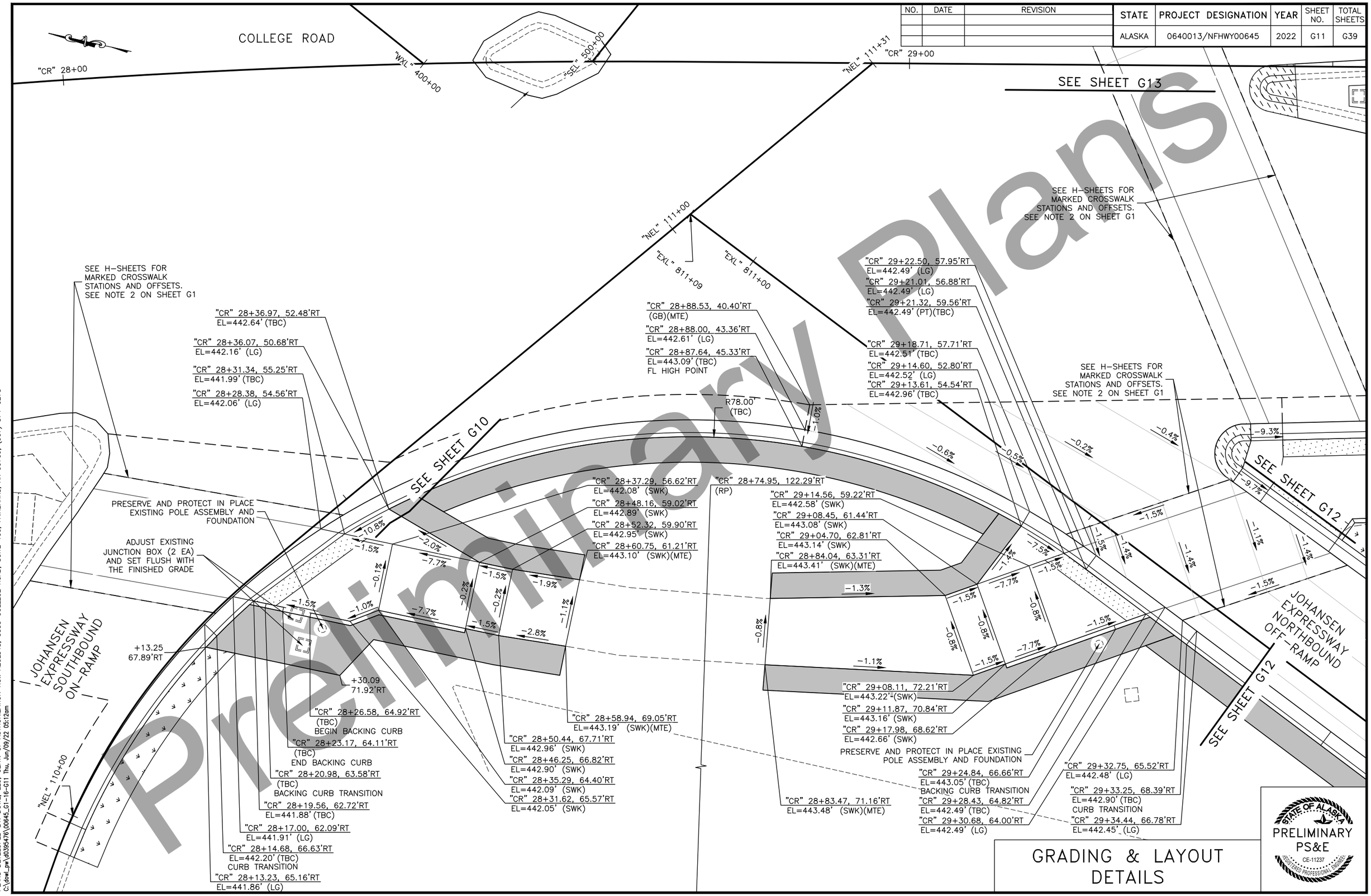
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\0064S_G1-16-G10 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G11	G39



Preliminary Plans

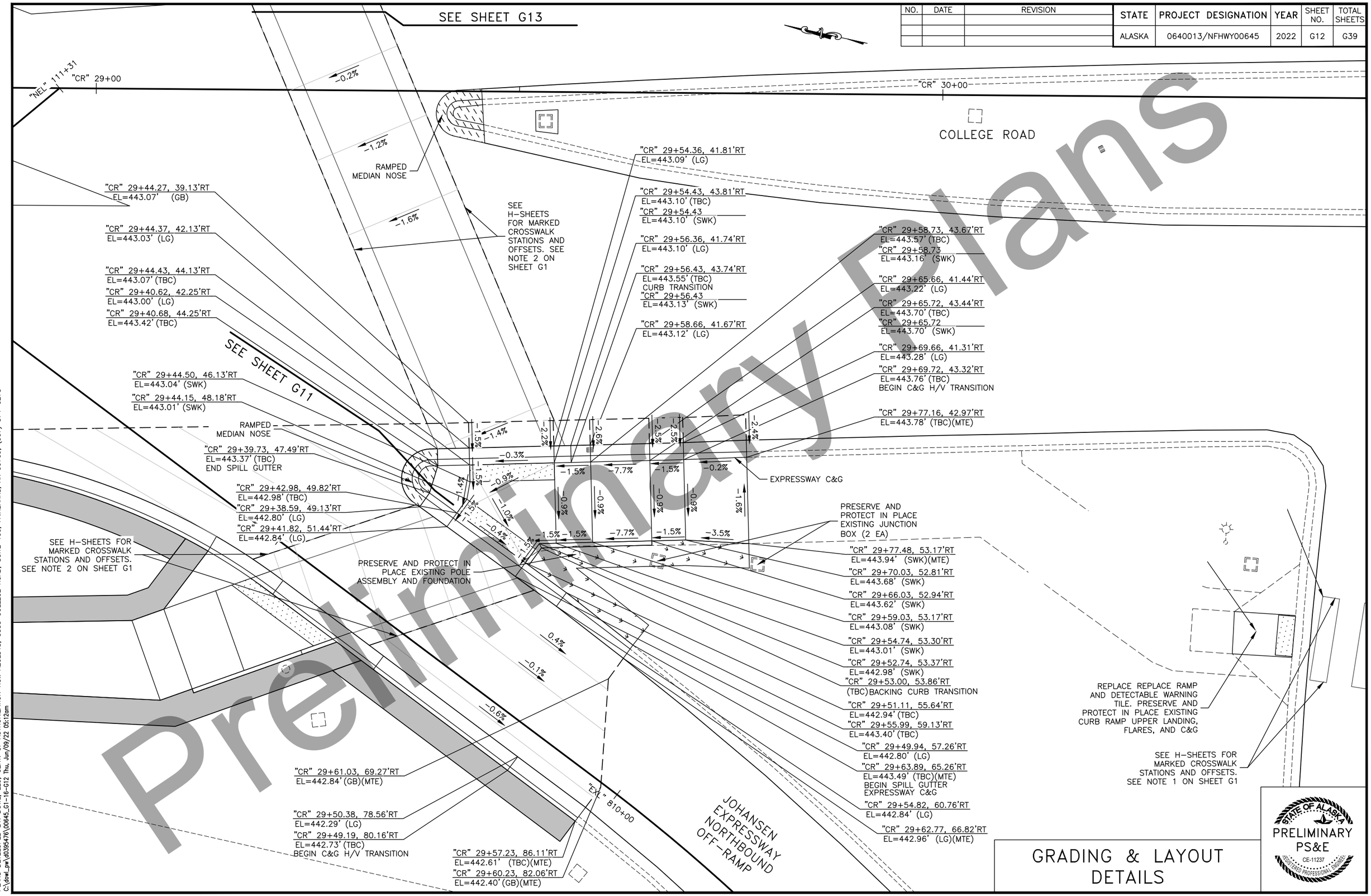
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G11 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G12	G39



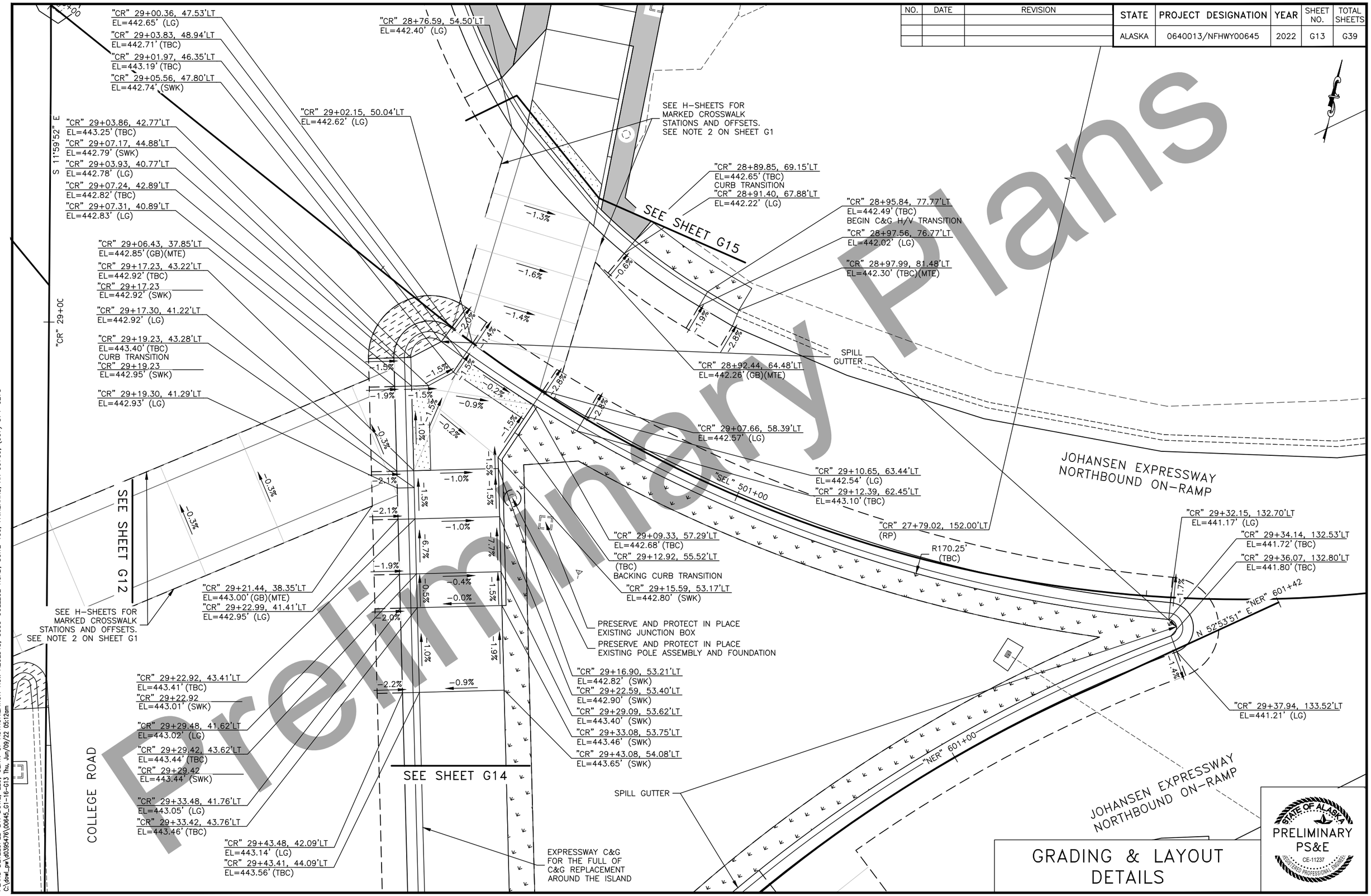
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G12 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G13	G39



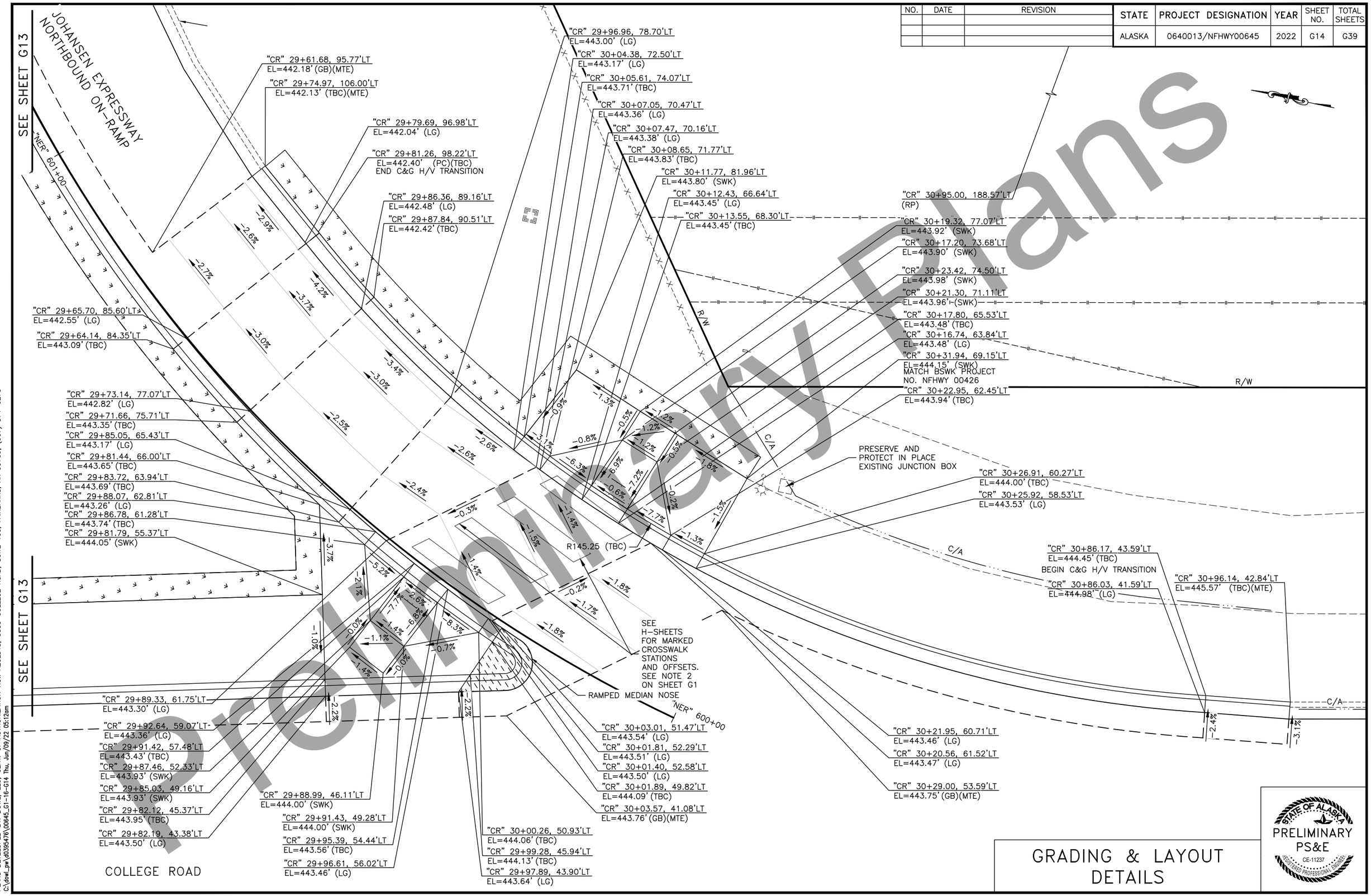
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G13 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G14	G39



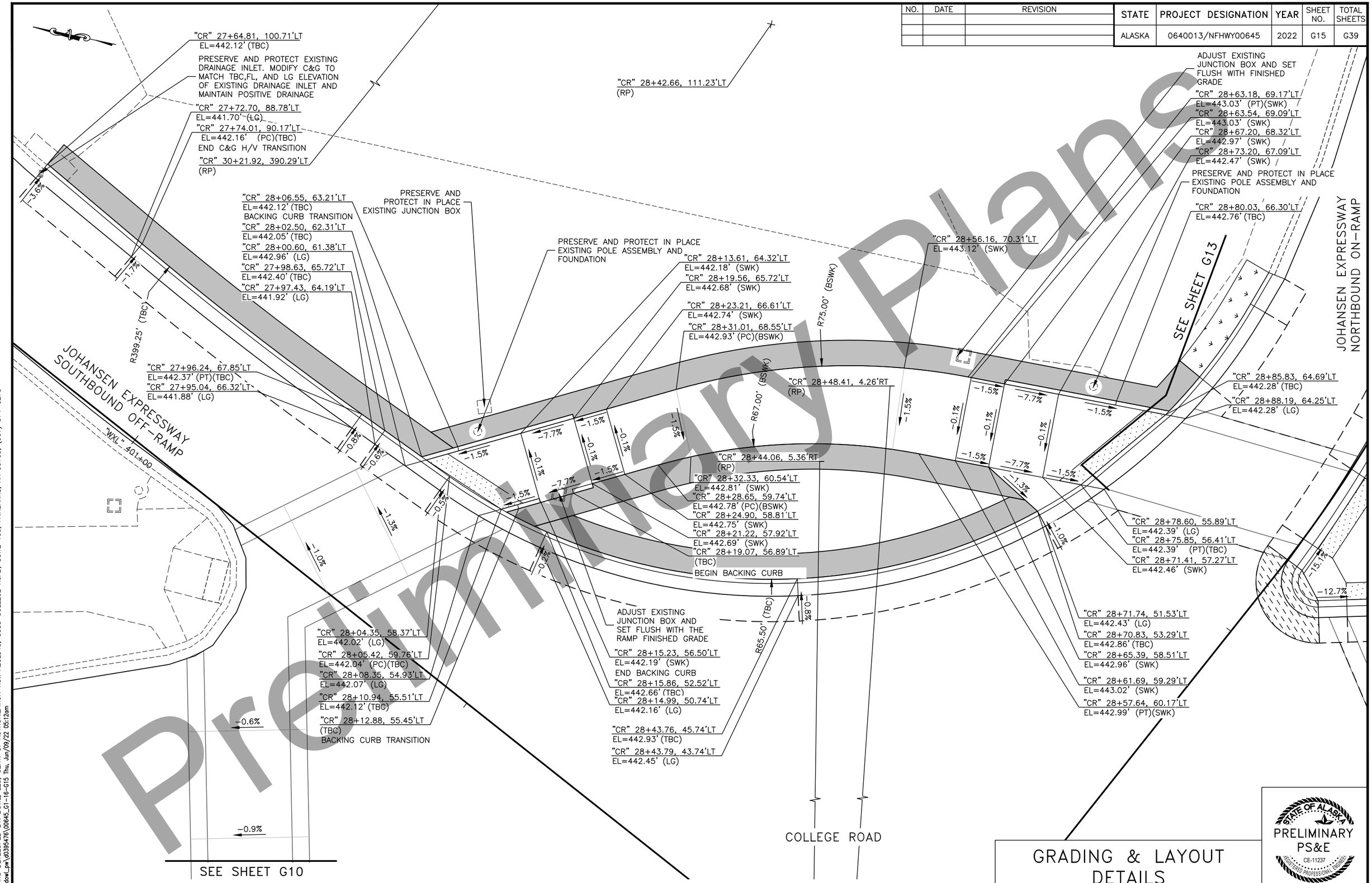
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G14 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G15	G39



Preliminary Plans

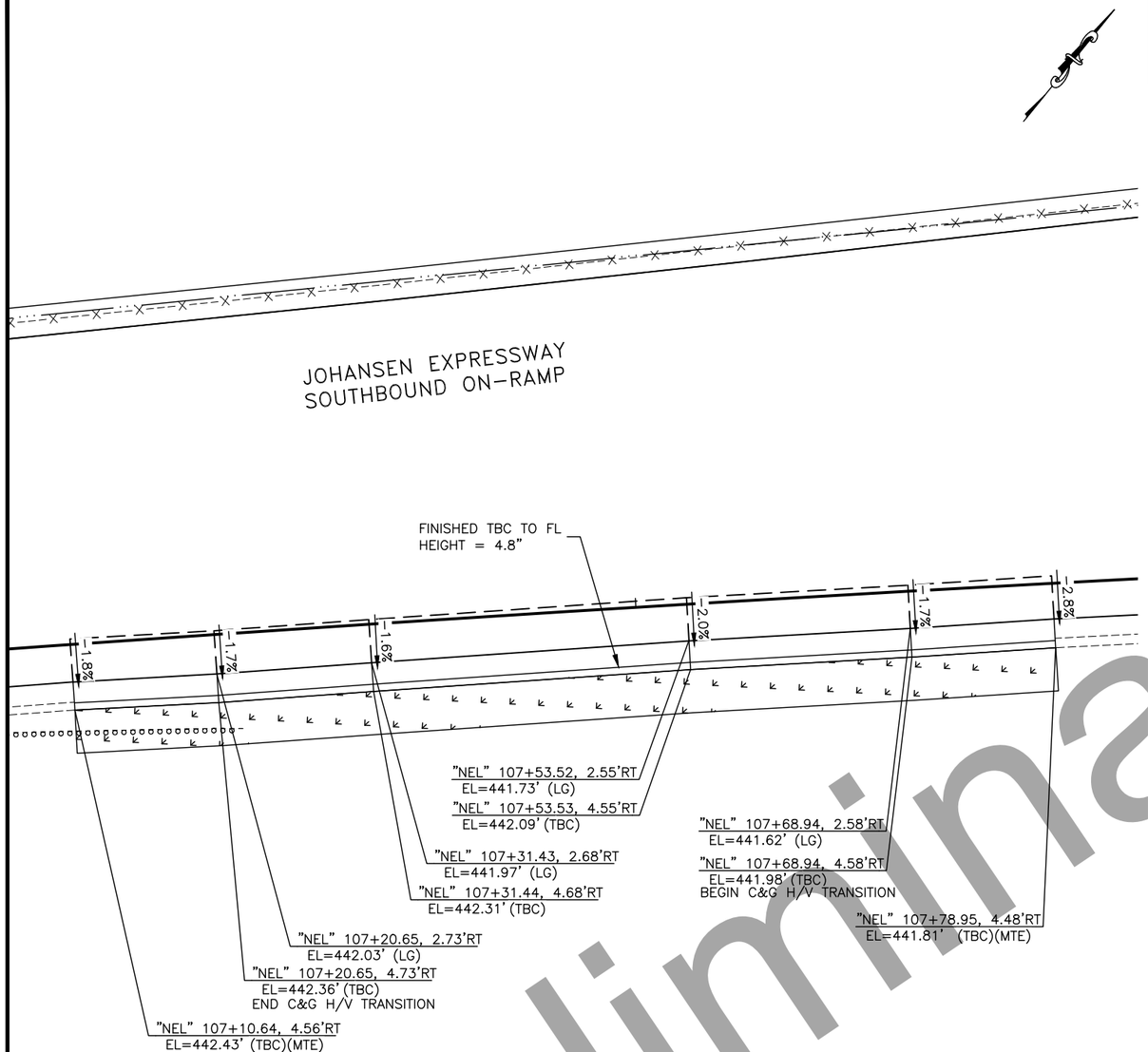
GRADING & LAYOUT DETAILS

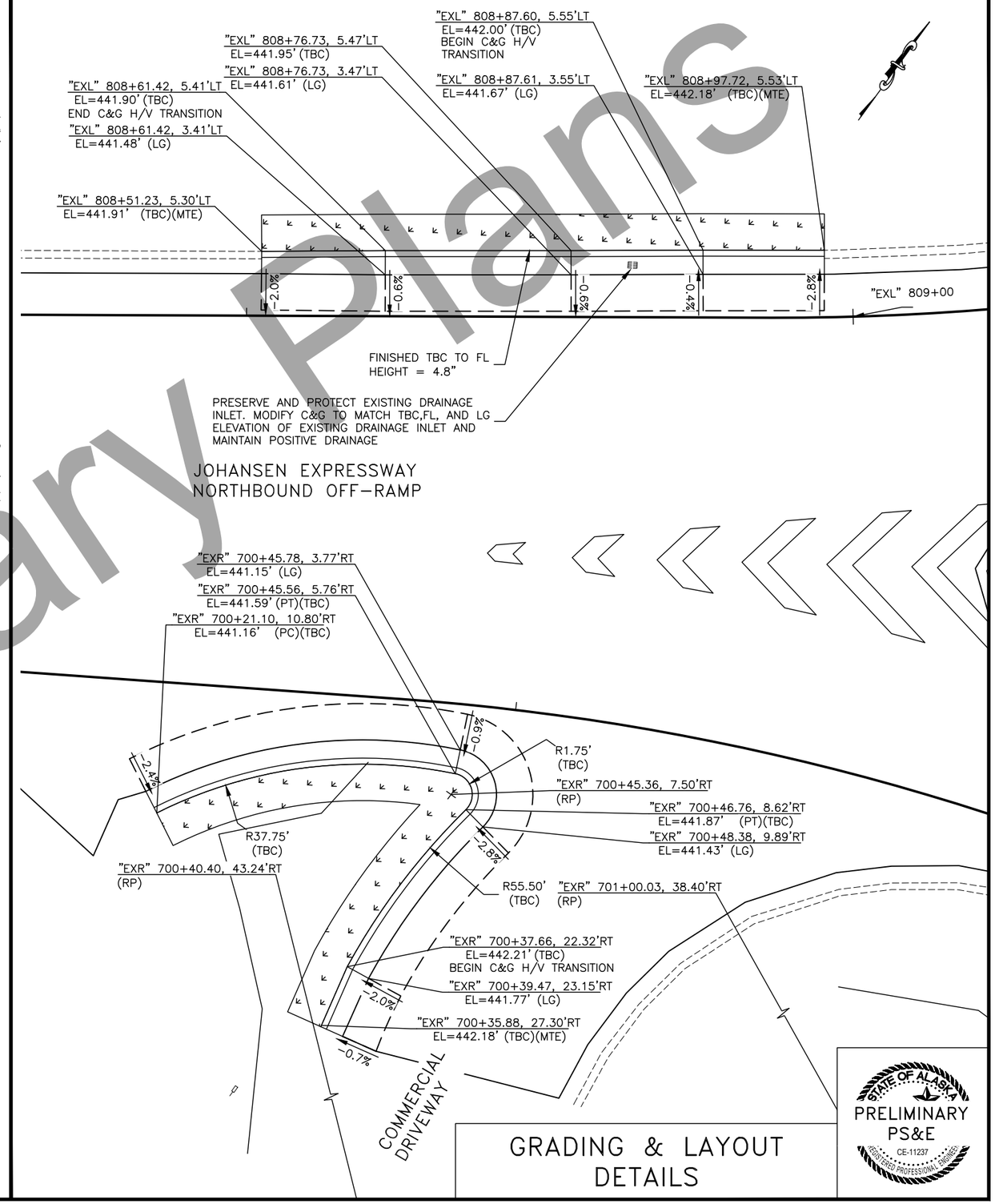
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G15 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G16	G39





GRADING & LAYOUT DETAILS

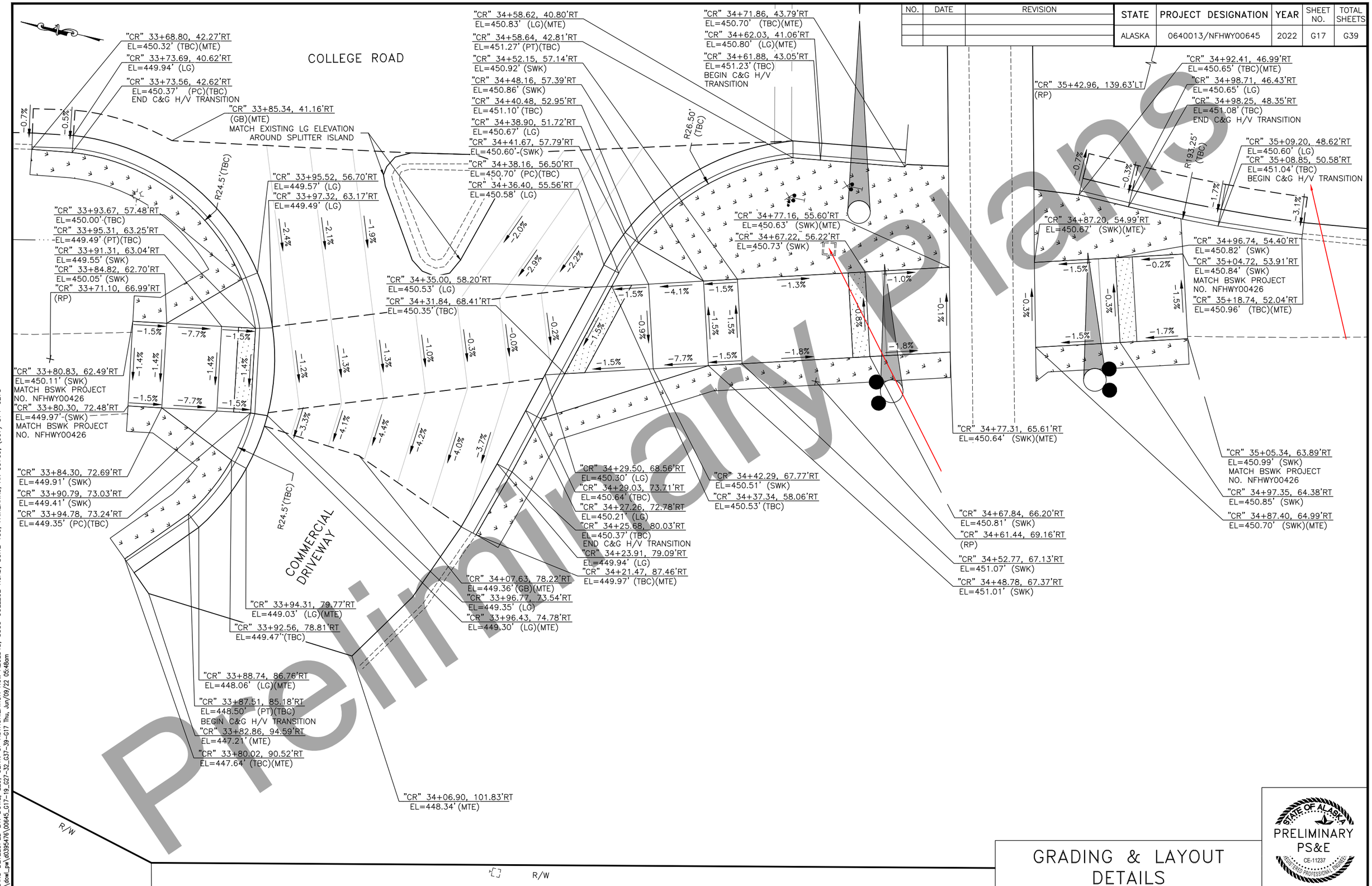
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G1-16-G16 Thu, Jun/09/22 05:12am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G17	G39



Preliminary Plans

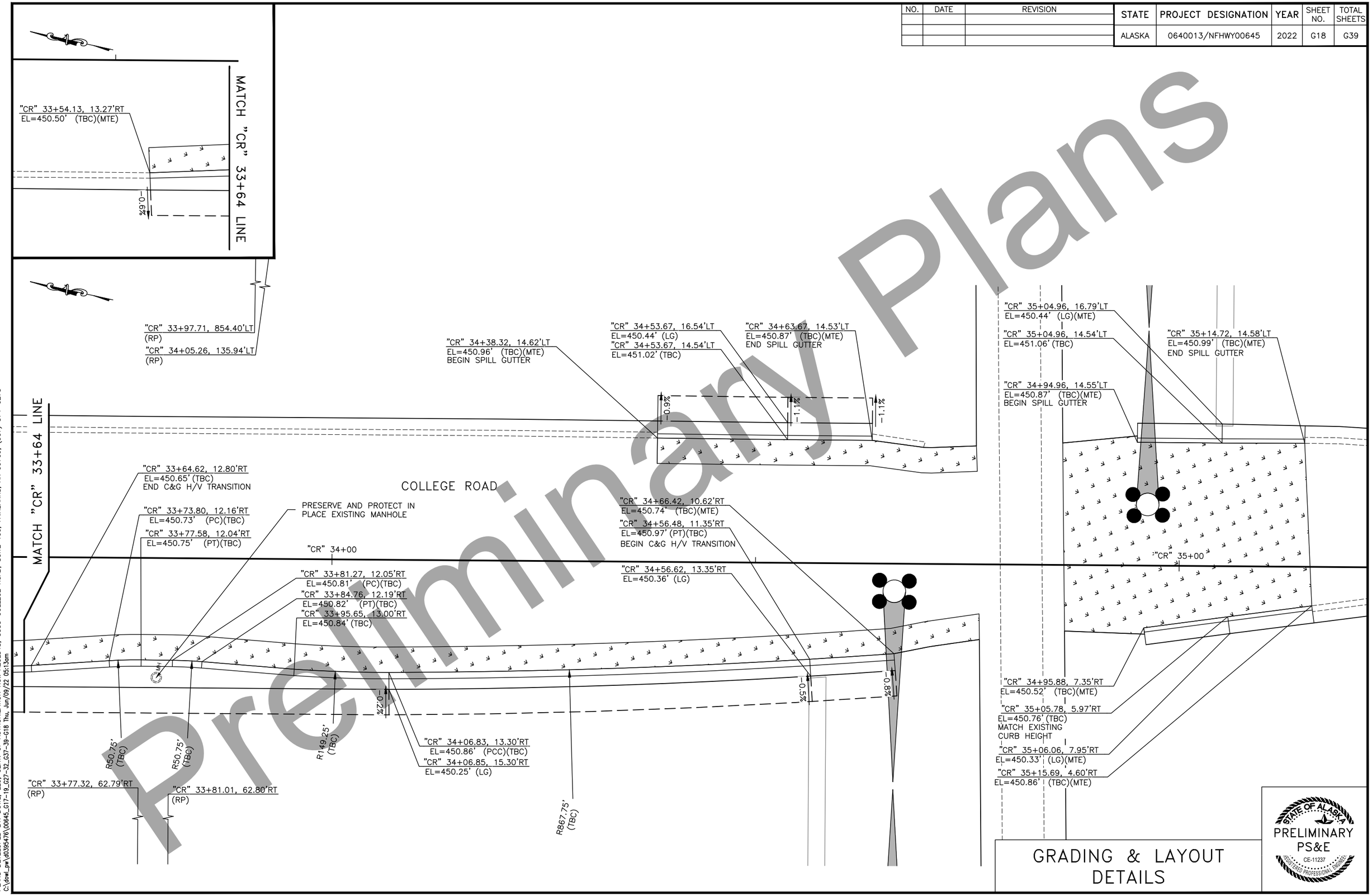
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\0395476\00645_G17-19_G27-32_G37-39-G17 Thu, Jun/09/22 05:48am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G18	G39



GRADING & LAYOUT DETAILS

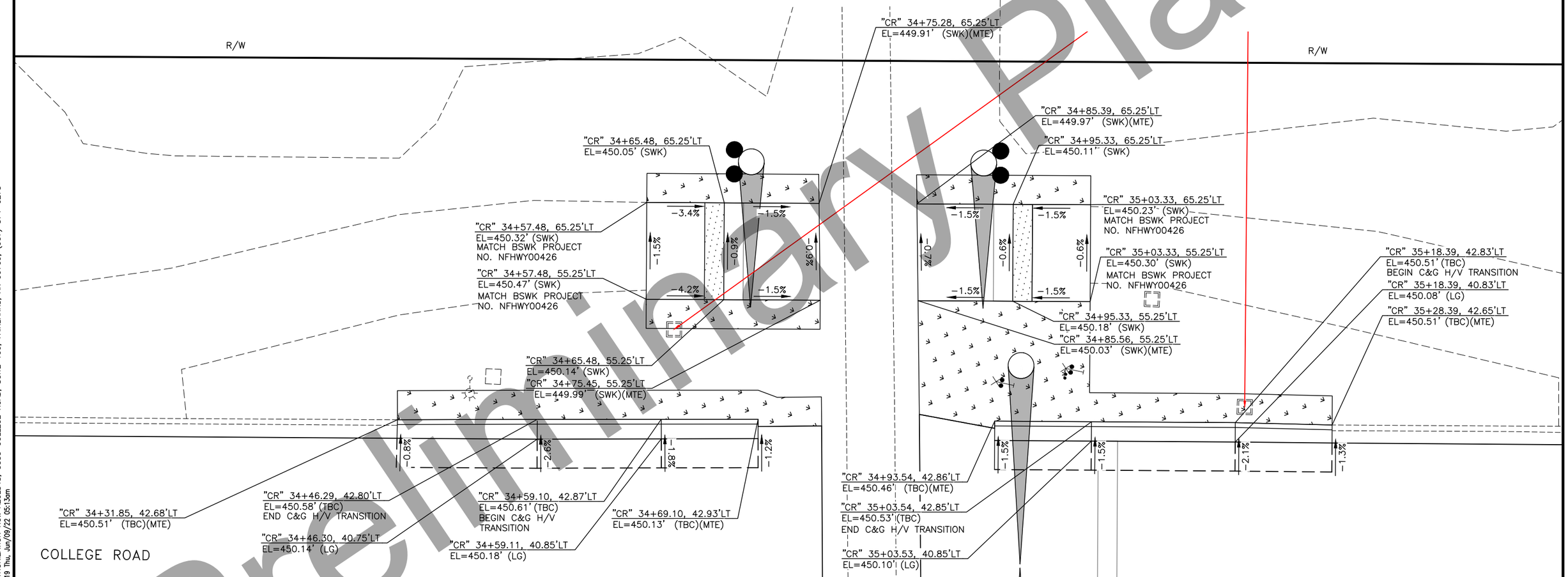
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G18 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G19	G39



GRADING & LAYOUT DETAILS

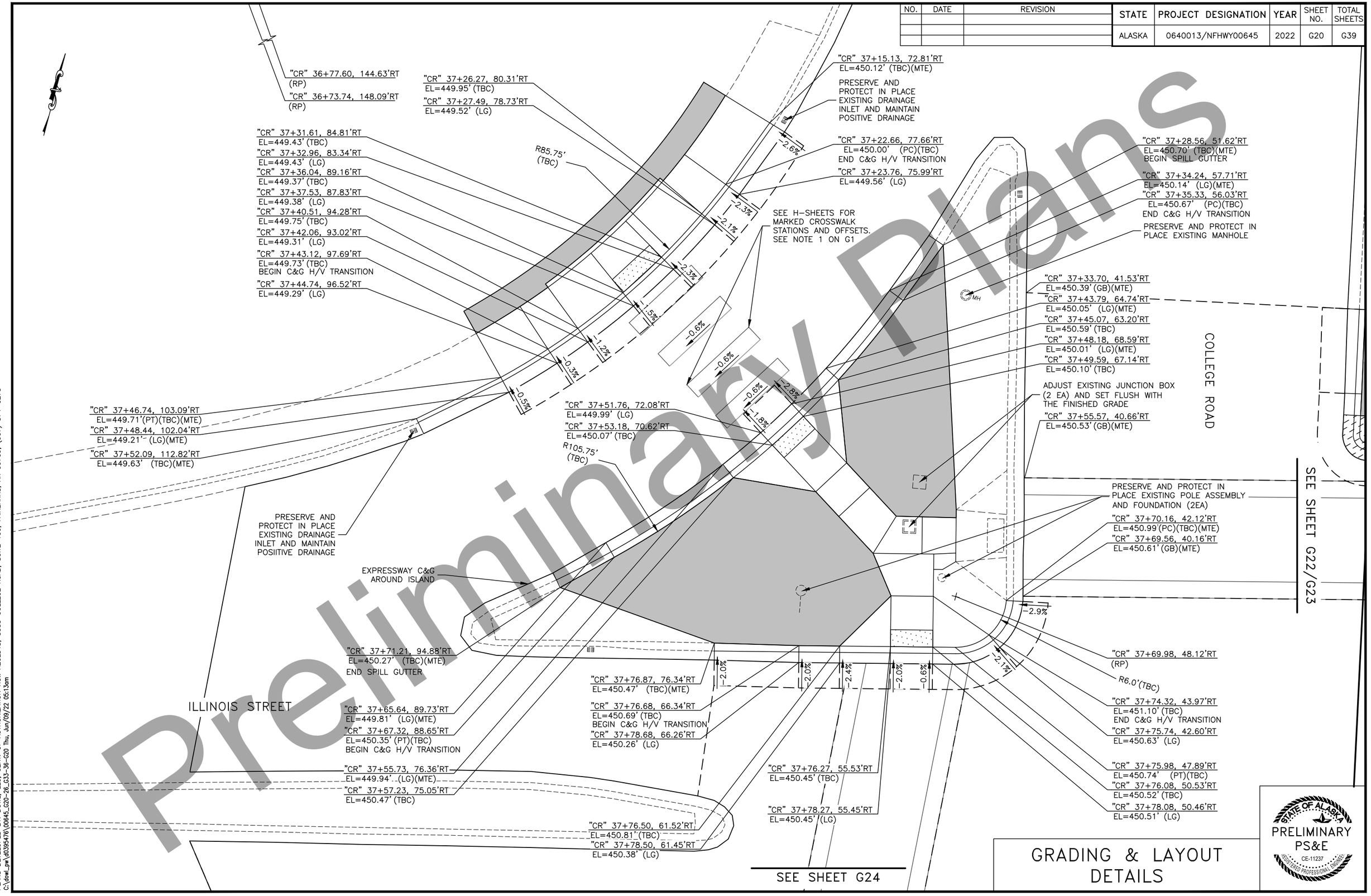
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G19 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G20	G39



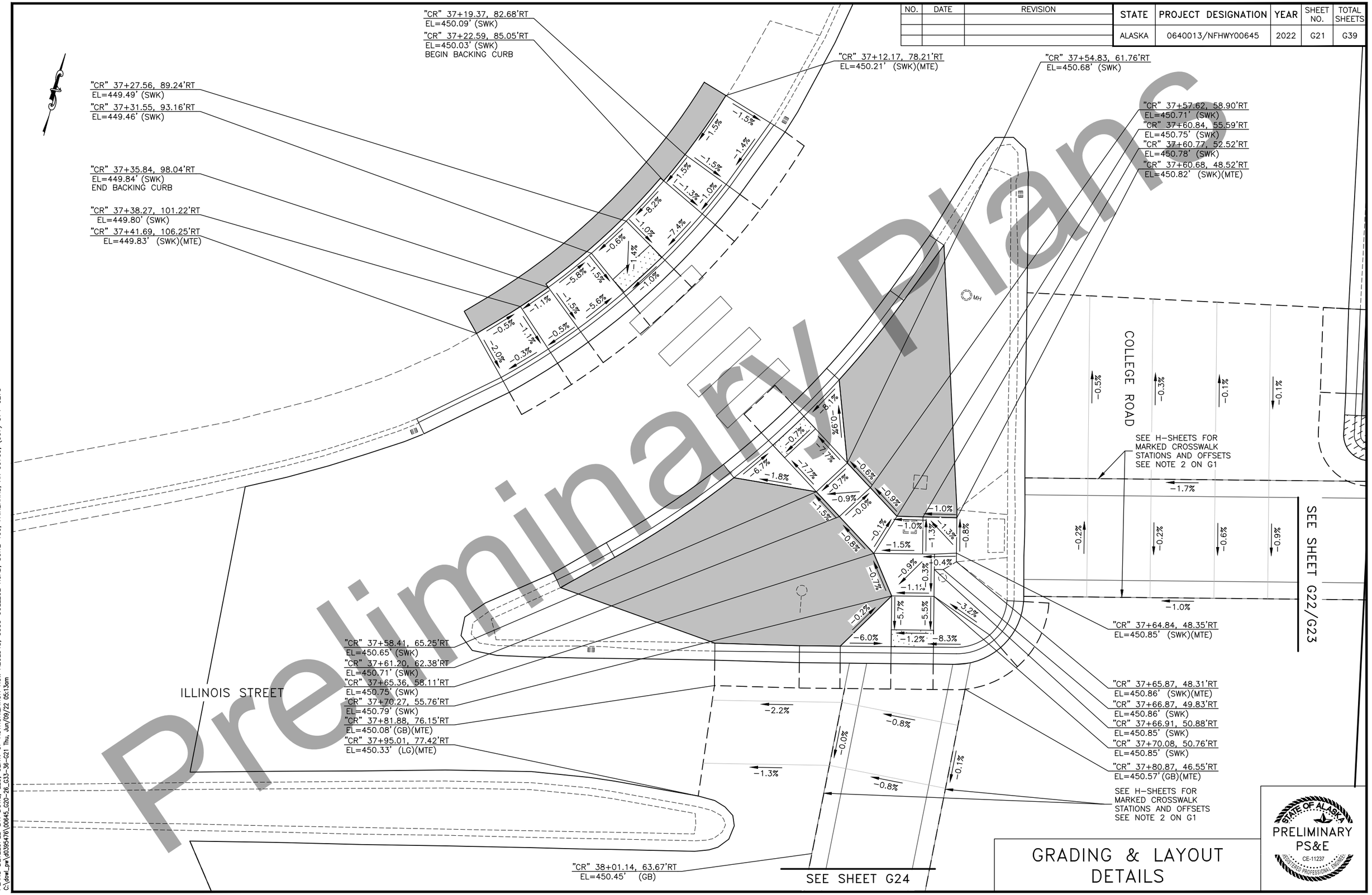
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G20 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G21	G39



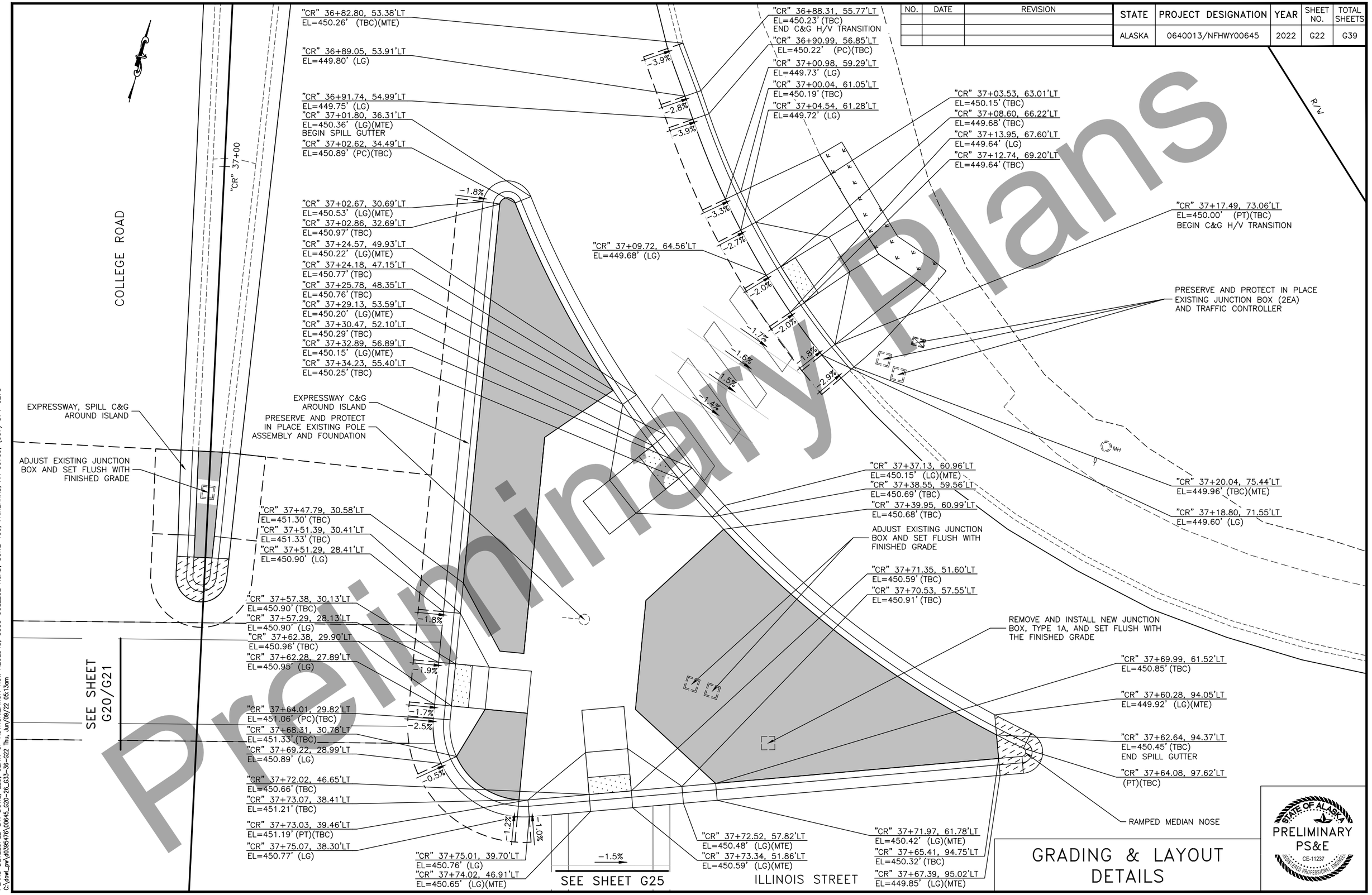
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\0064S_G20-26_G33-36-G21 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G22	G39



Preliminary Plans

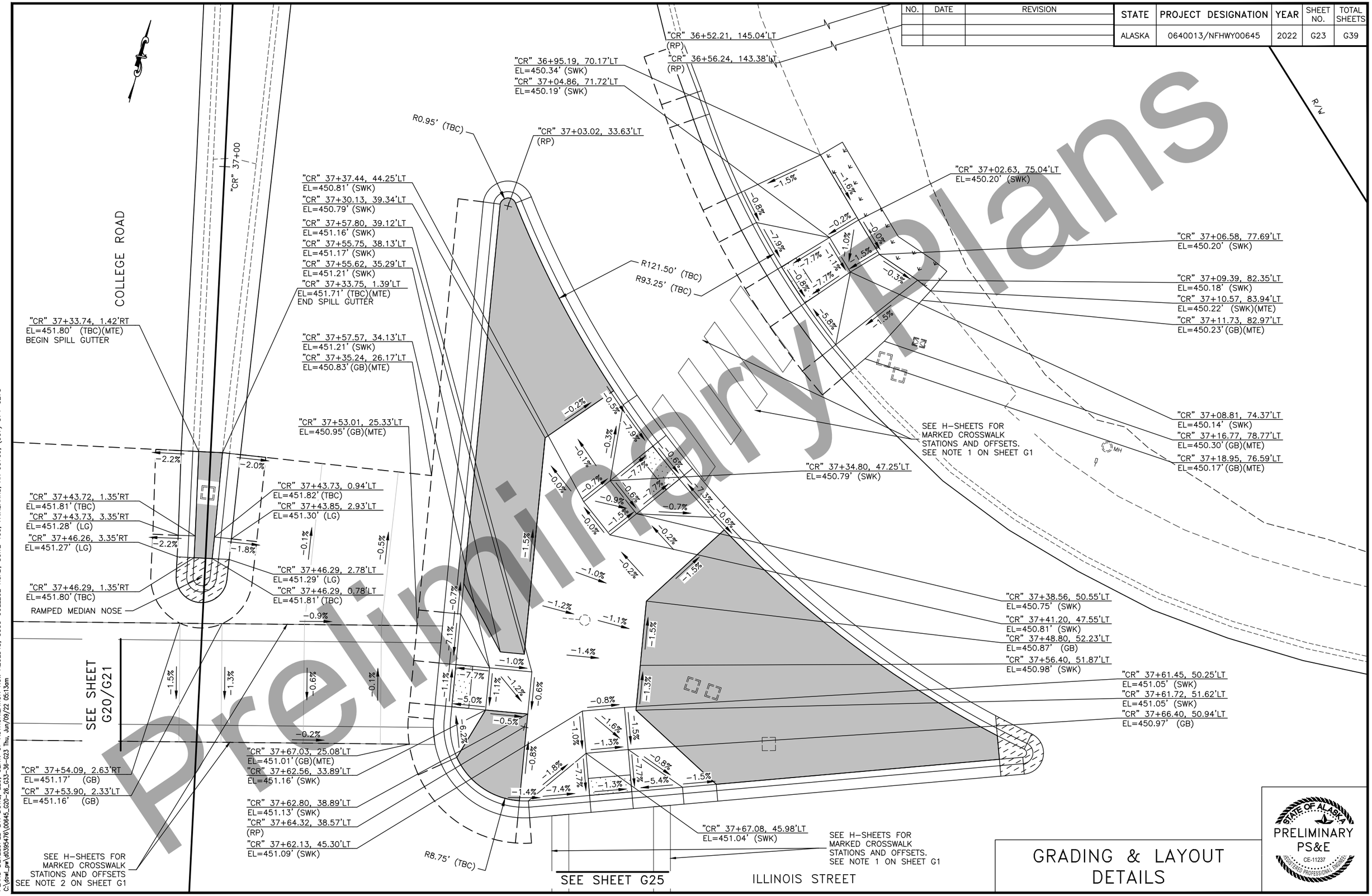
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G22 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G23	G39



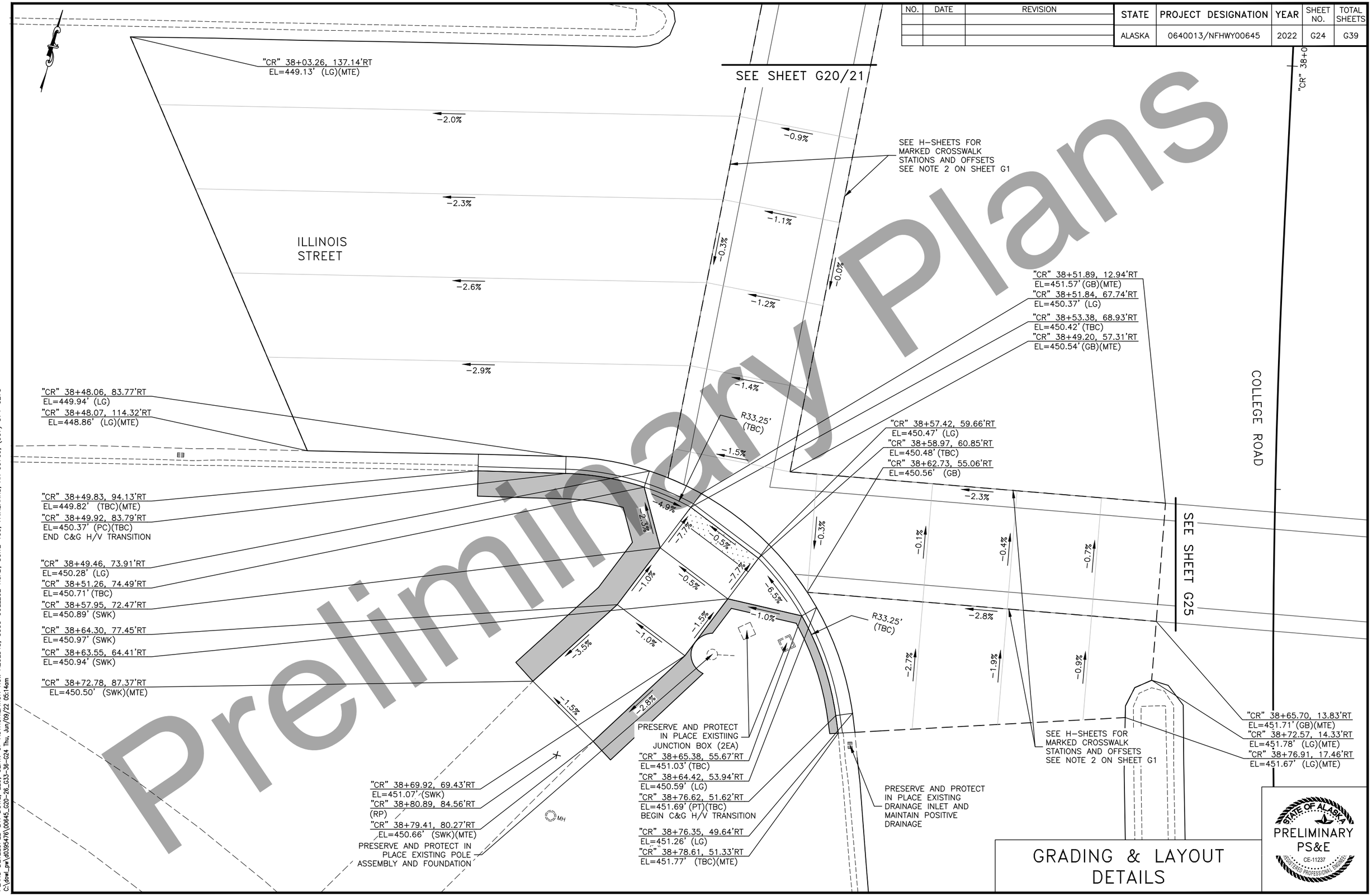
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER
CE-11237

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G23 Thu, Jun/09/22 05:13am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G24	G39



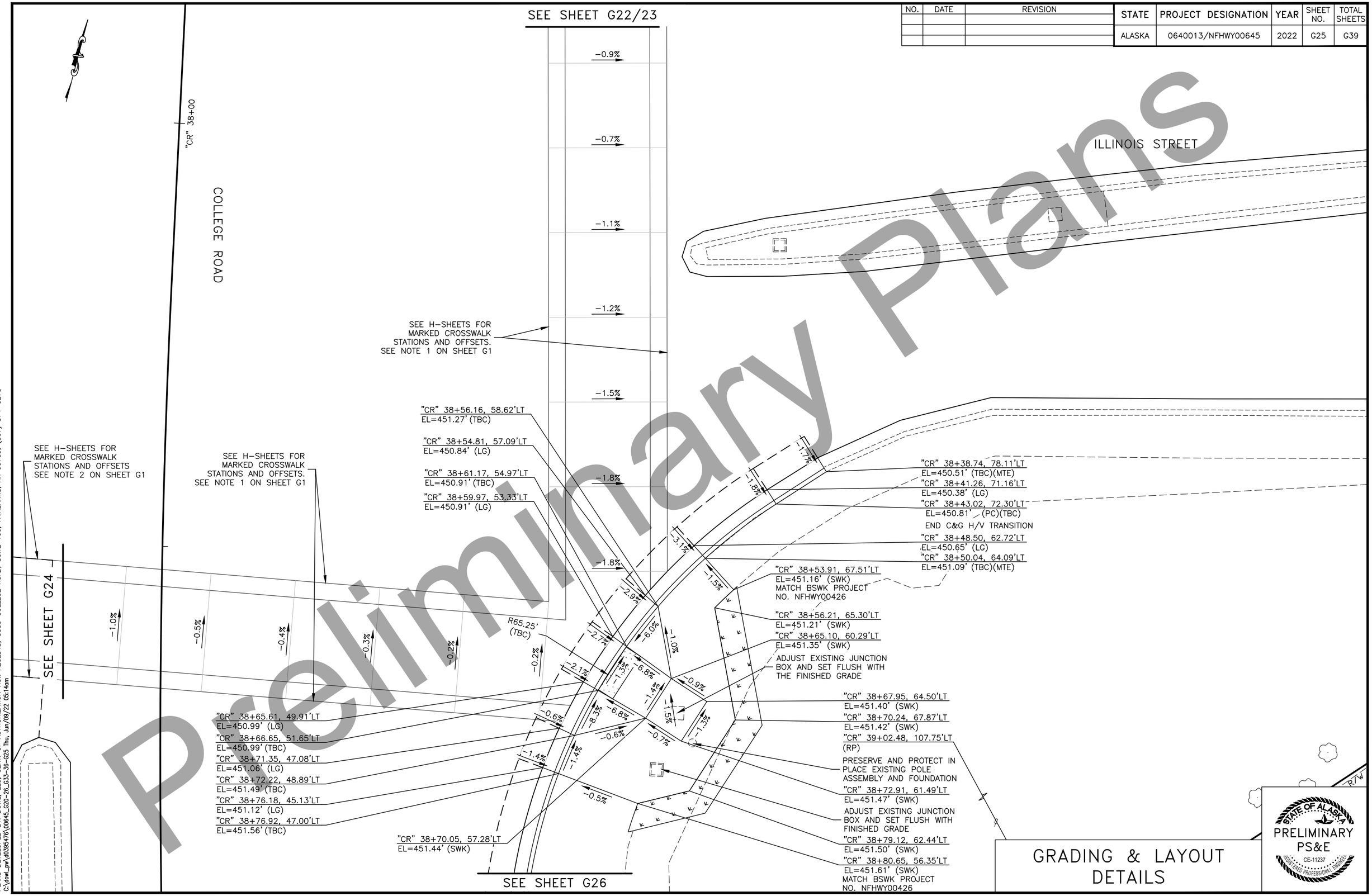
GRADING & LAYOUT DETAILS

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G24 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G25	G39

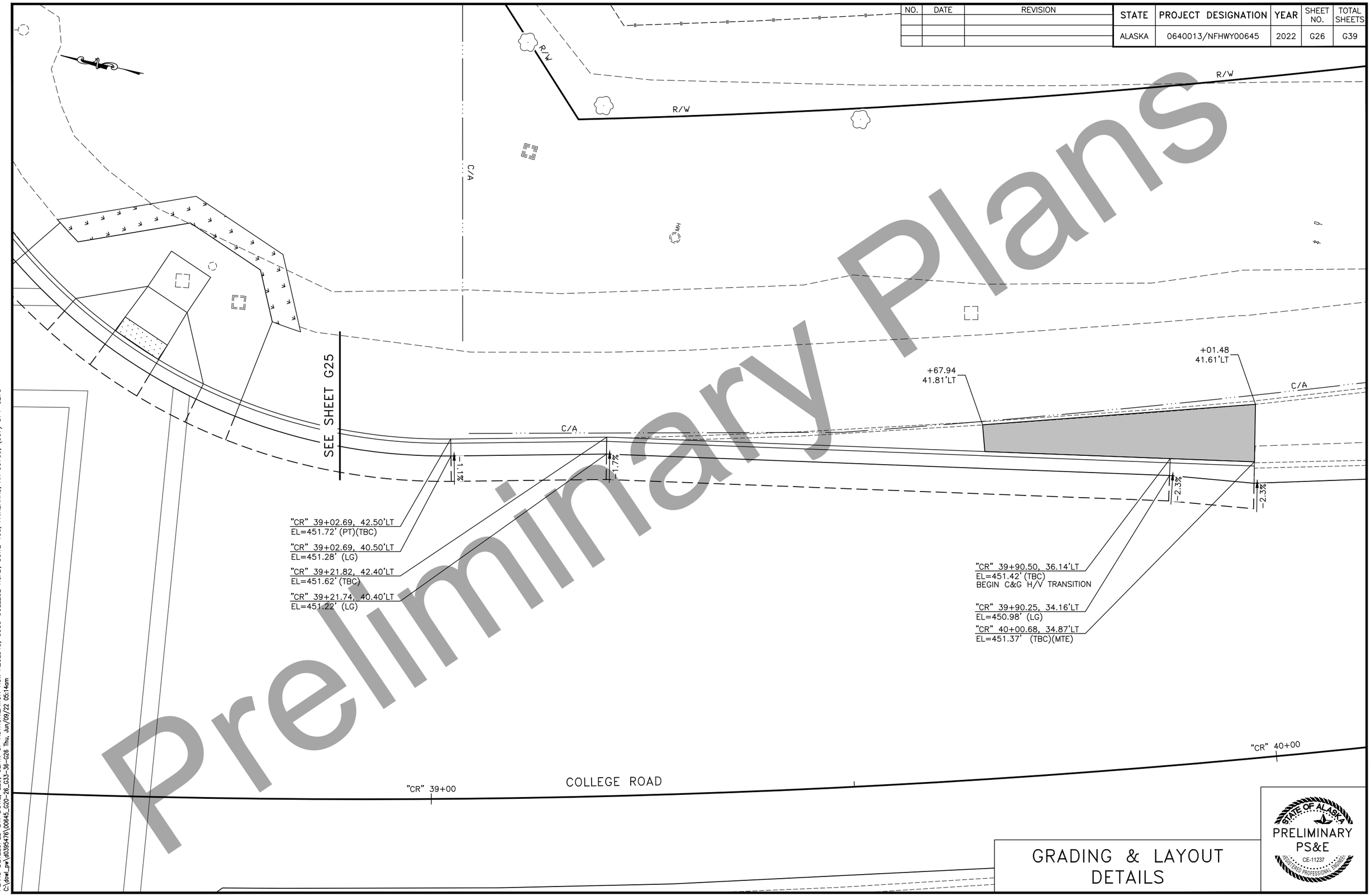


GRADING & LAYOUT DETAILS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G25 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G26	G39



Preliminary Plans

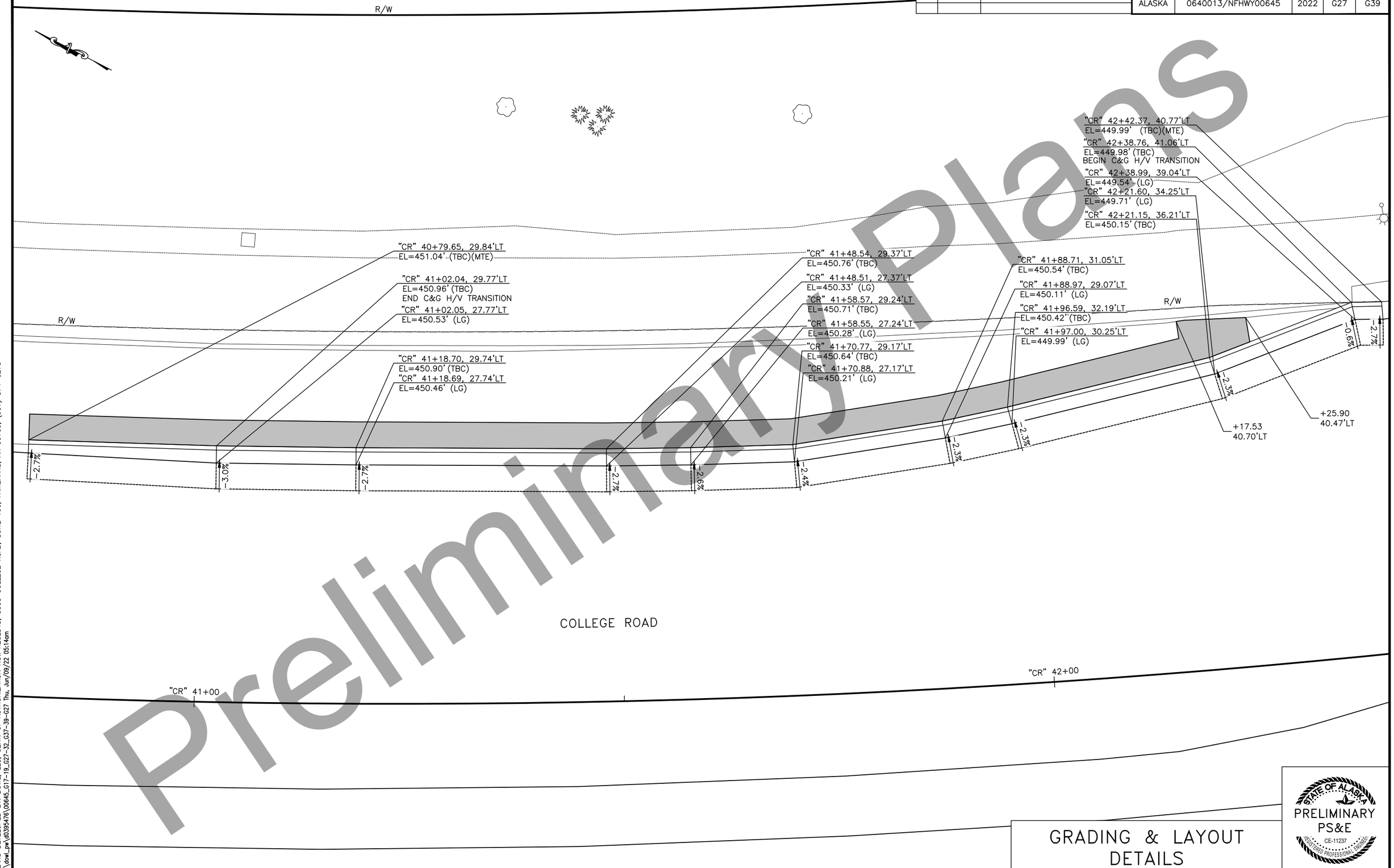
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d039547b\00645_C20-26_G33-36-G26 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G27	G39



Preliminary Plans

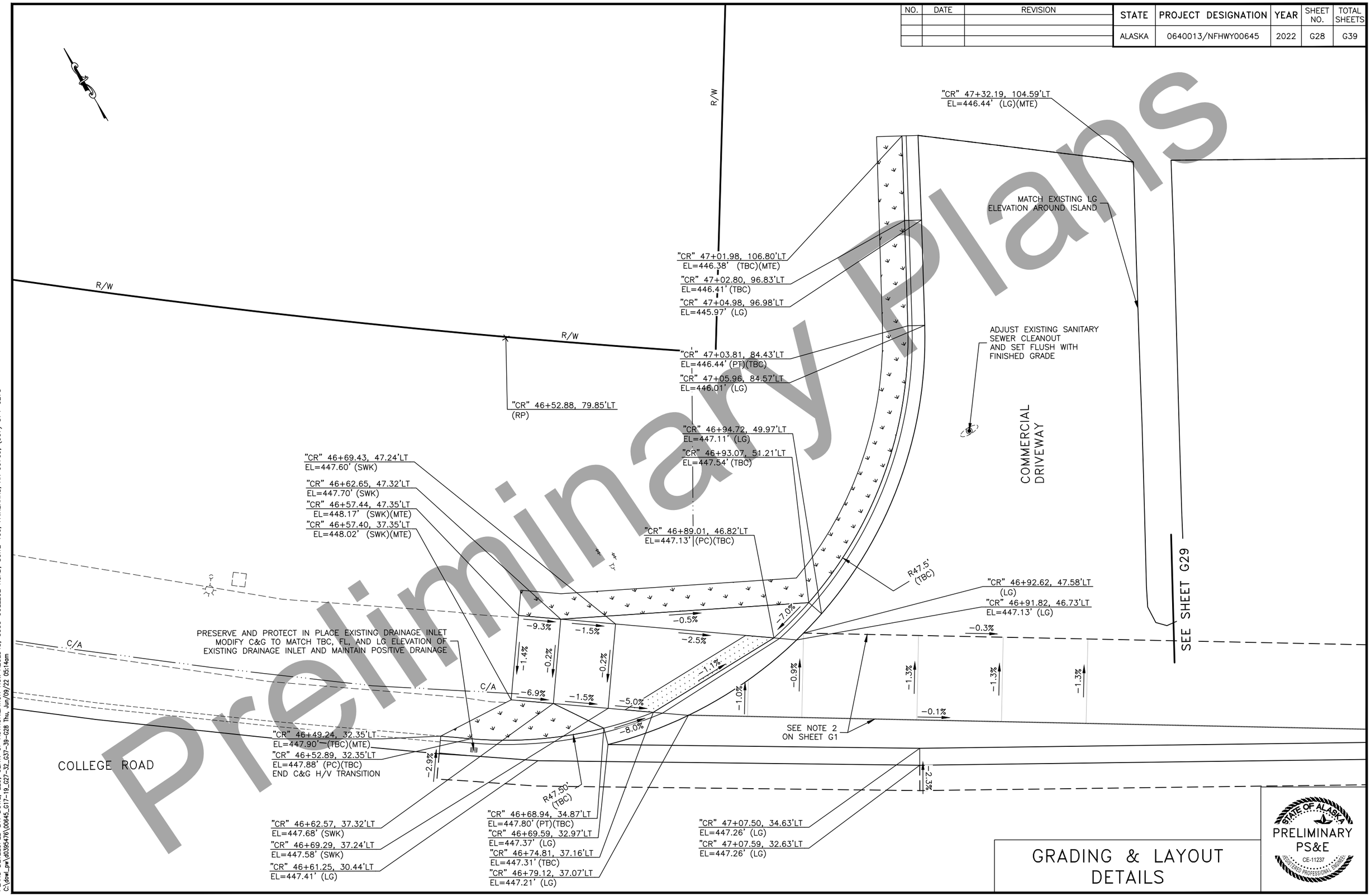
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G27 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G28	G39



GRADING & LAYOUT DETAILS

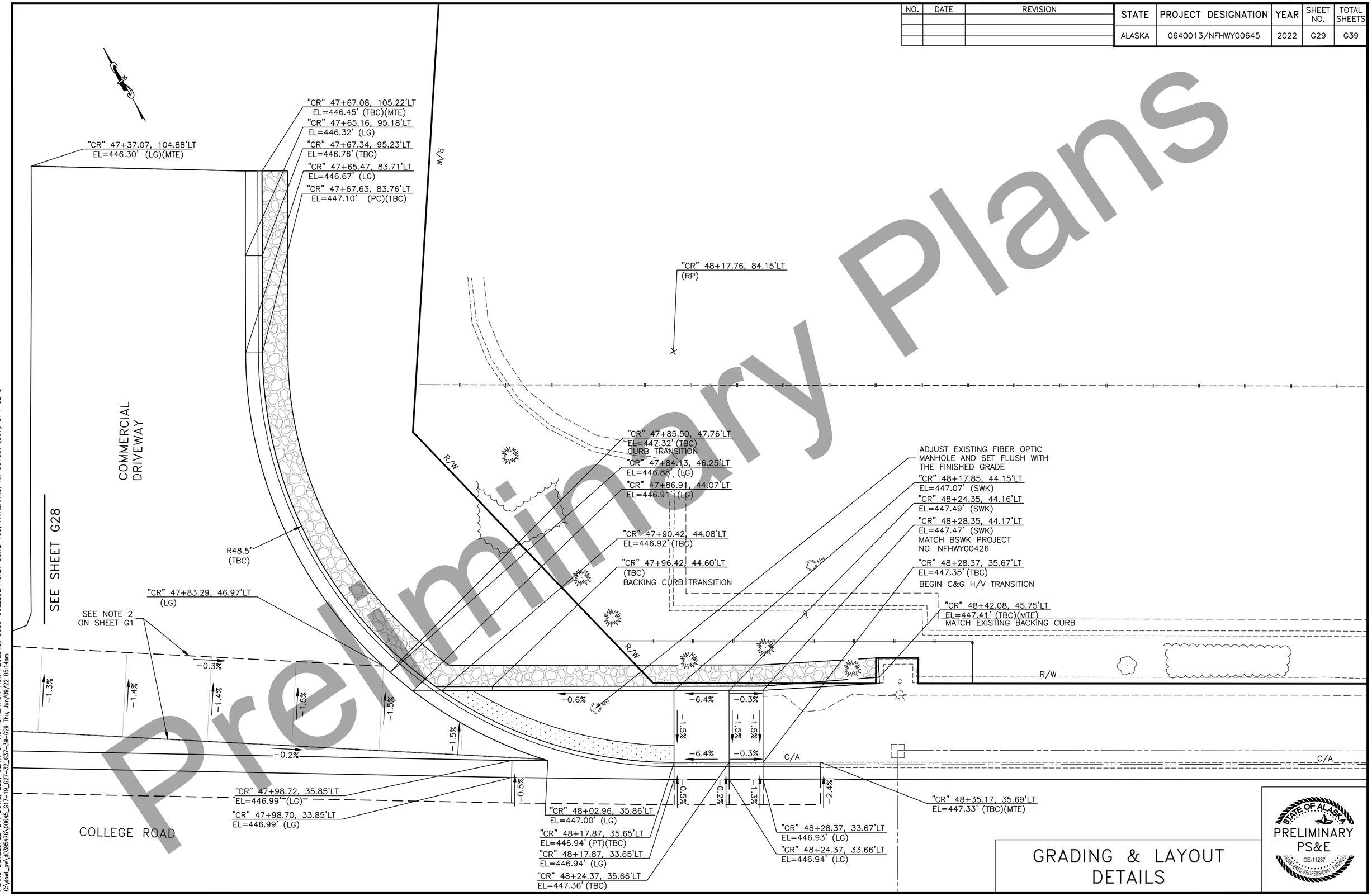
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G28 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G29	G39

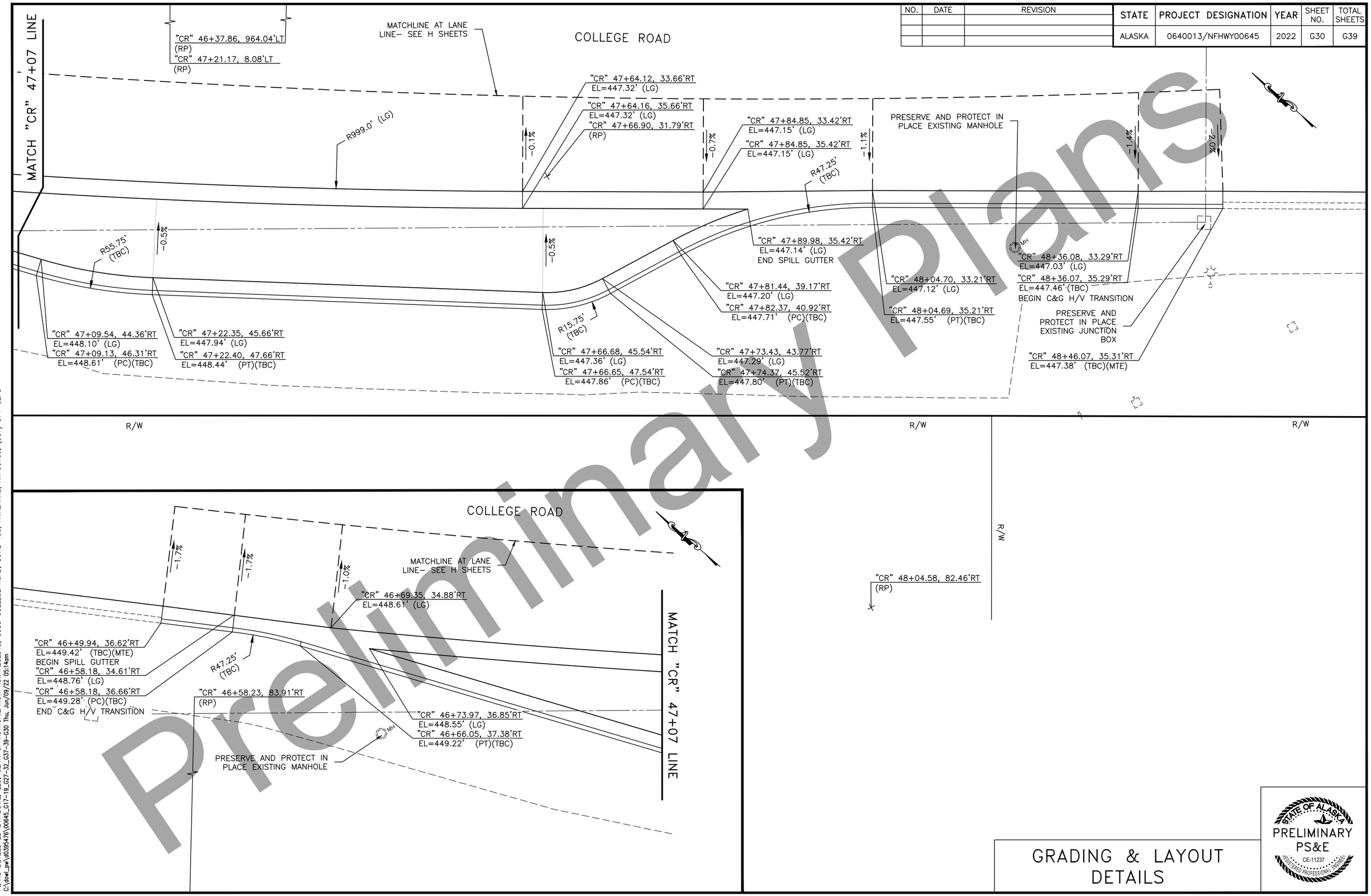


Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G29 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G30	G39



GRADING & LAYOUT DETAILS

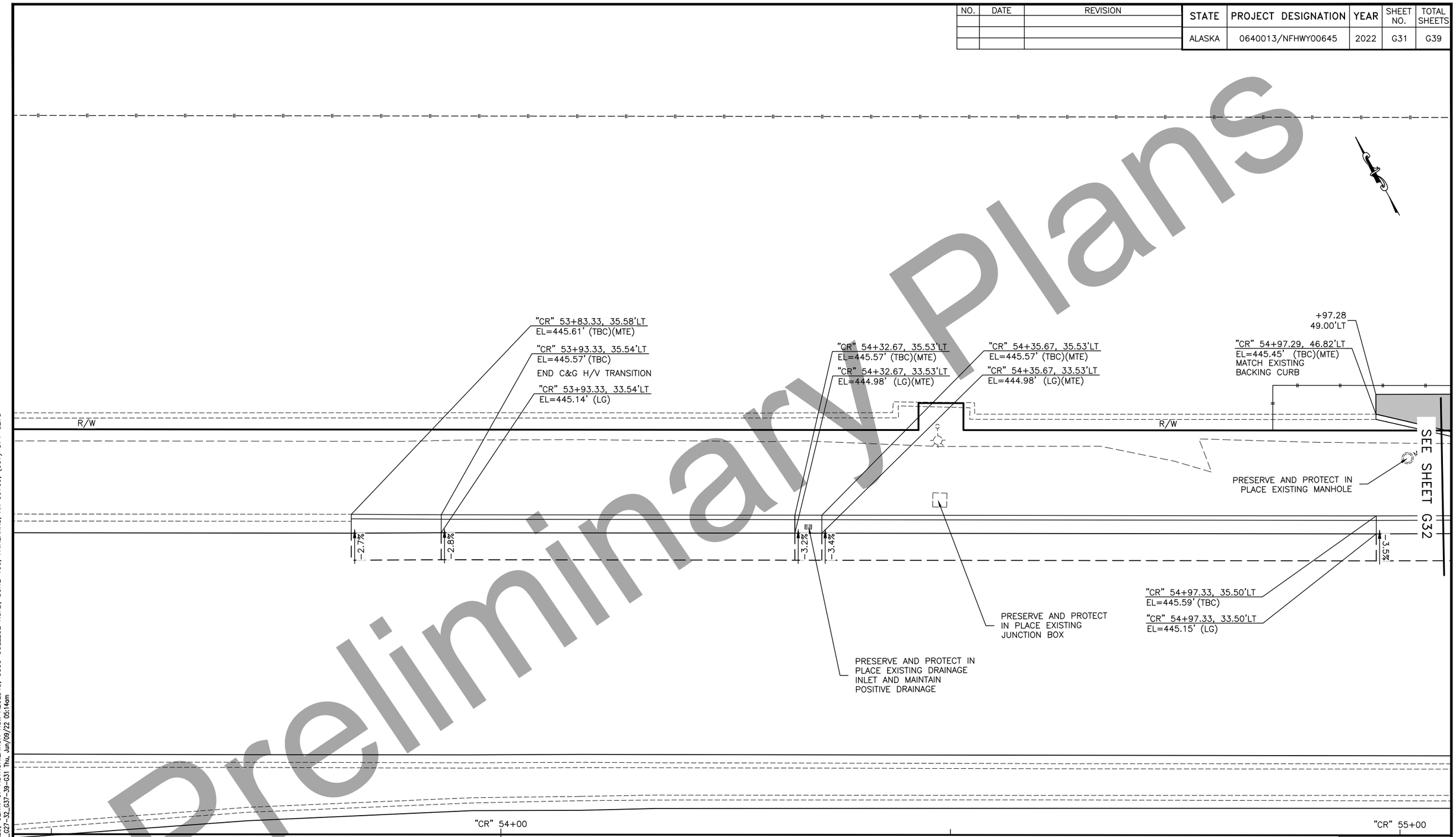
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G30 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G31	G39



Preliminary Plans

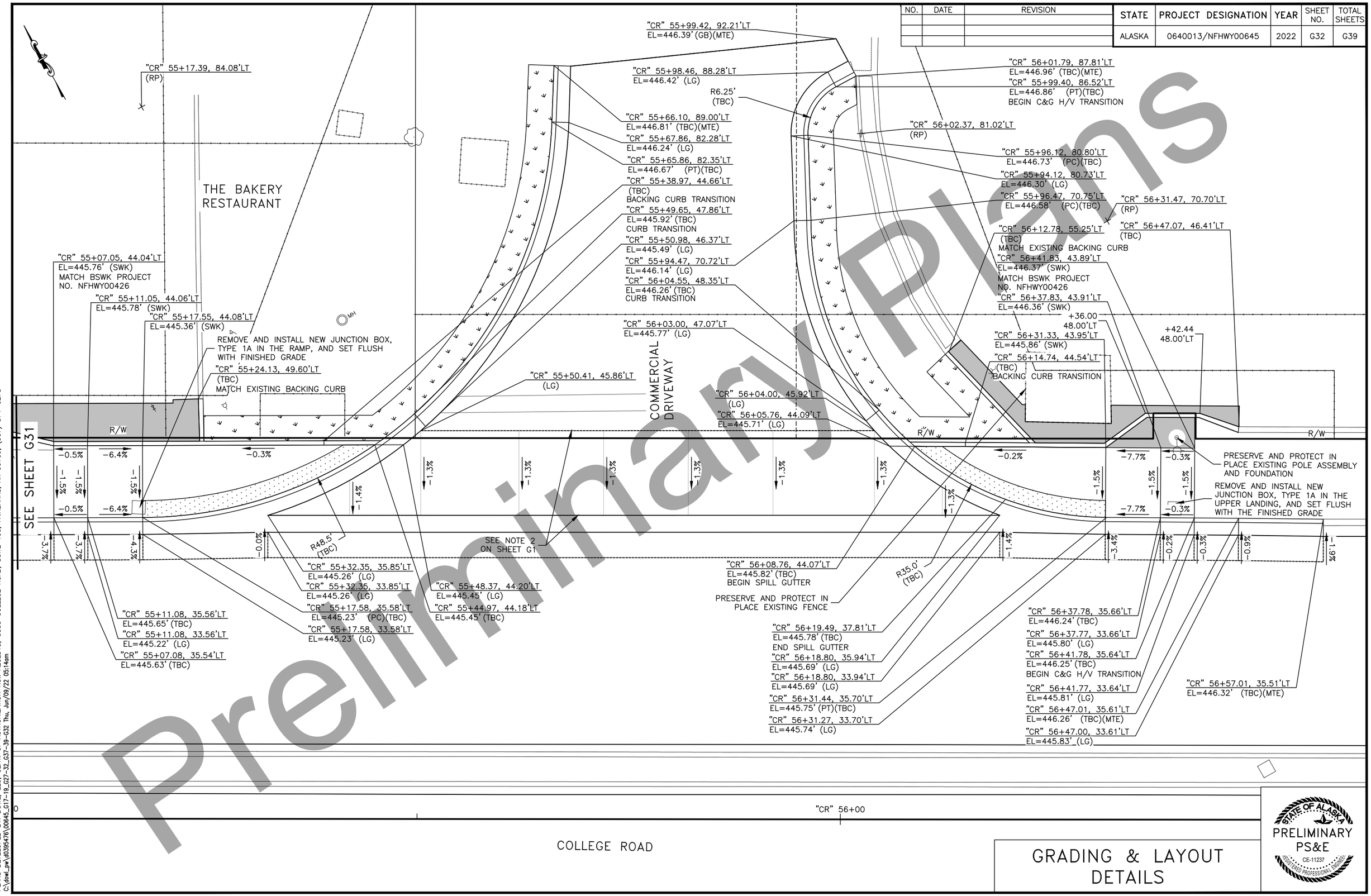
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
LICENSED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G31 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G32	G39



GRADING & LAYOUT DETAILS

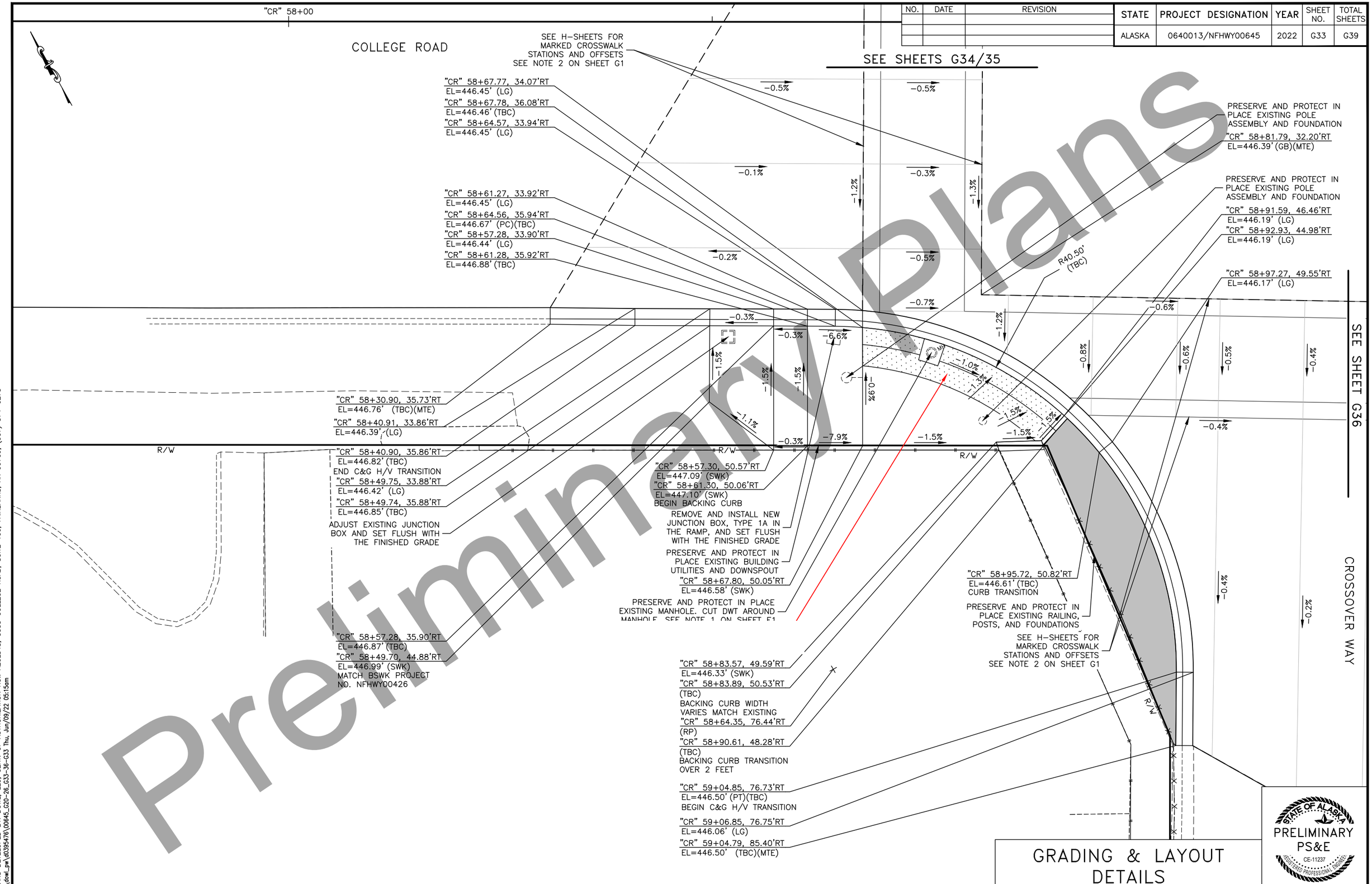
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G32 Thu, Jun/09/22 05:14am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G33	G39



GRADING & LAYOUT DETAILS

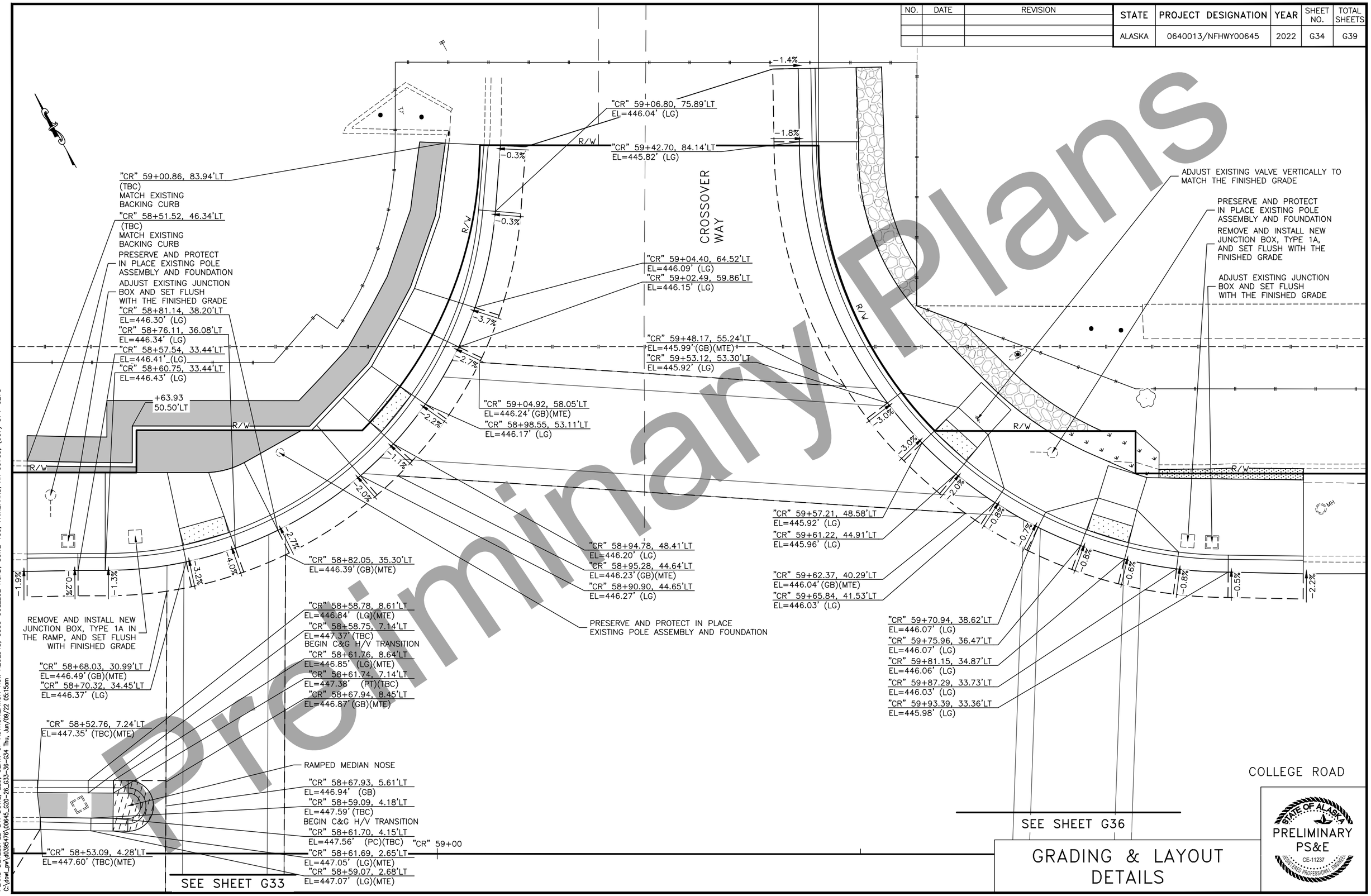
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G33 Thu, Jun/09/22 05:15am

NO.	DATE	REVISION

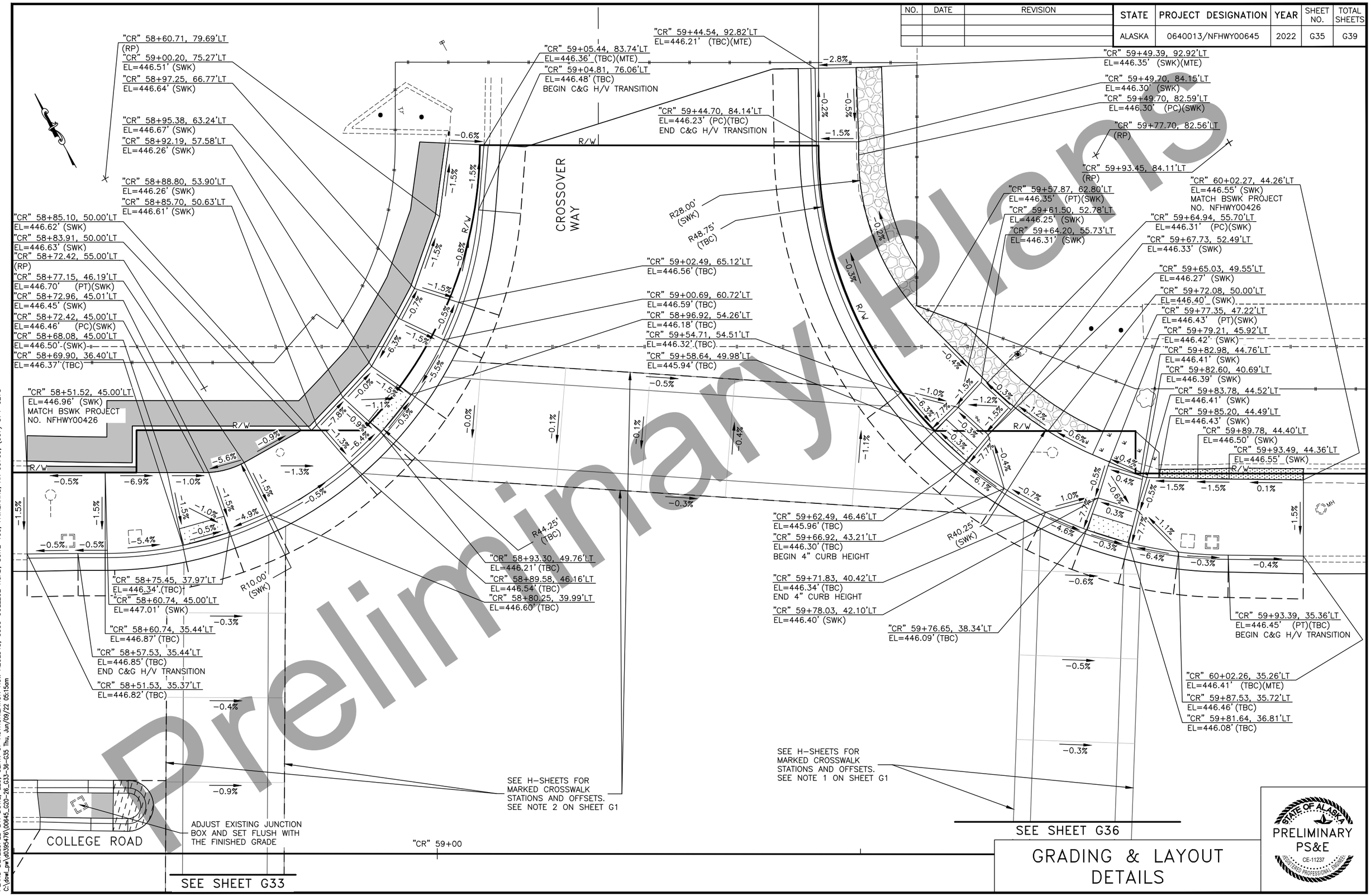
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G34	G39



PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\D0645_G20-26_G33-36-G34 Thu, Jun/09/22 05:15am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G35	G39



GRADING & LAYOUT DETAILS

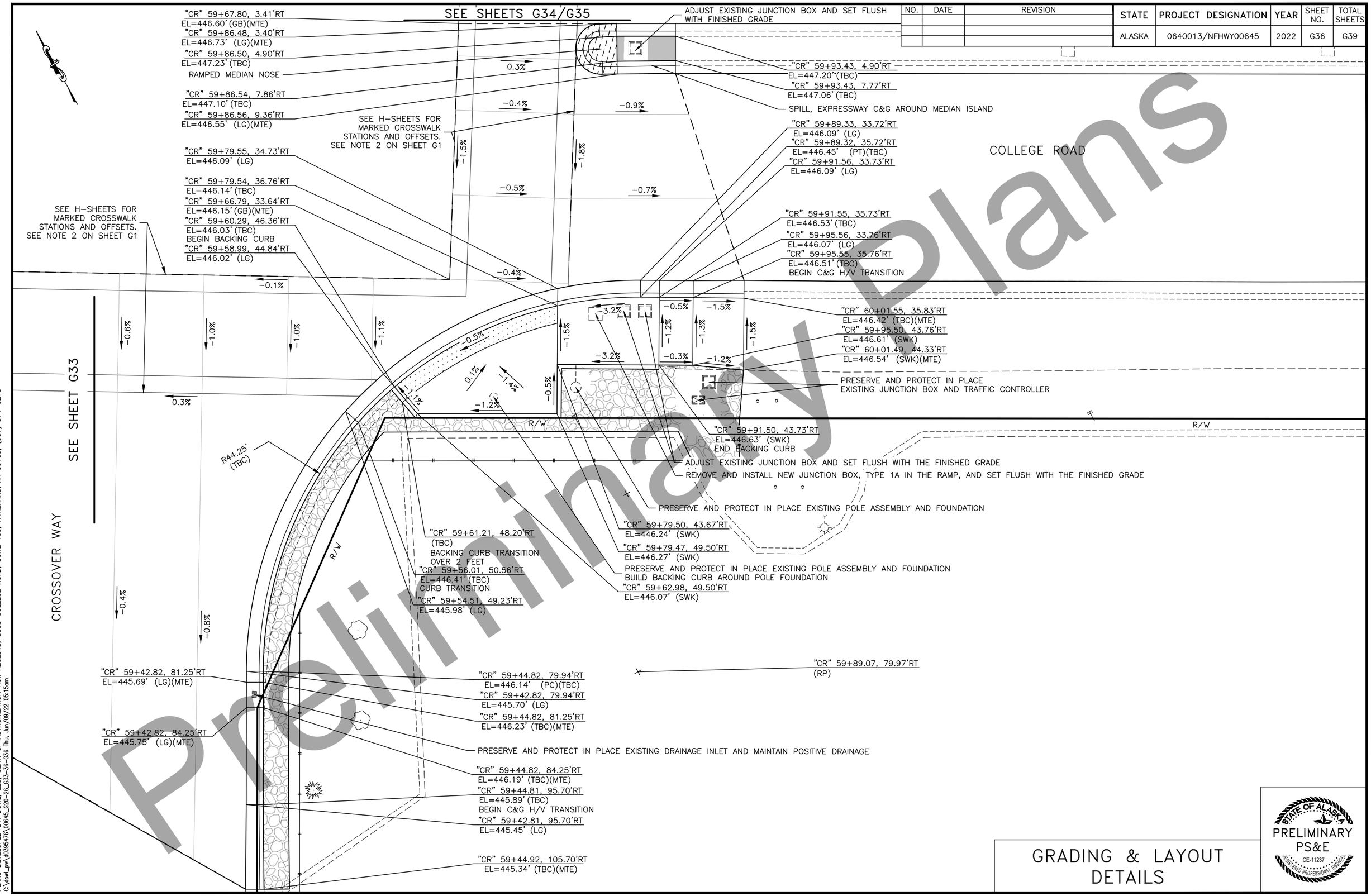
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G35 Thu, Jun/09/22 05:15am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G36	G39



GRADING & LAYOUT DETAILS

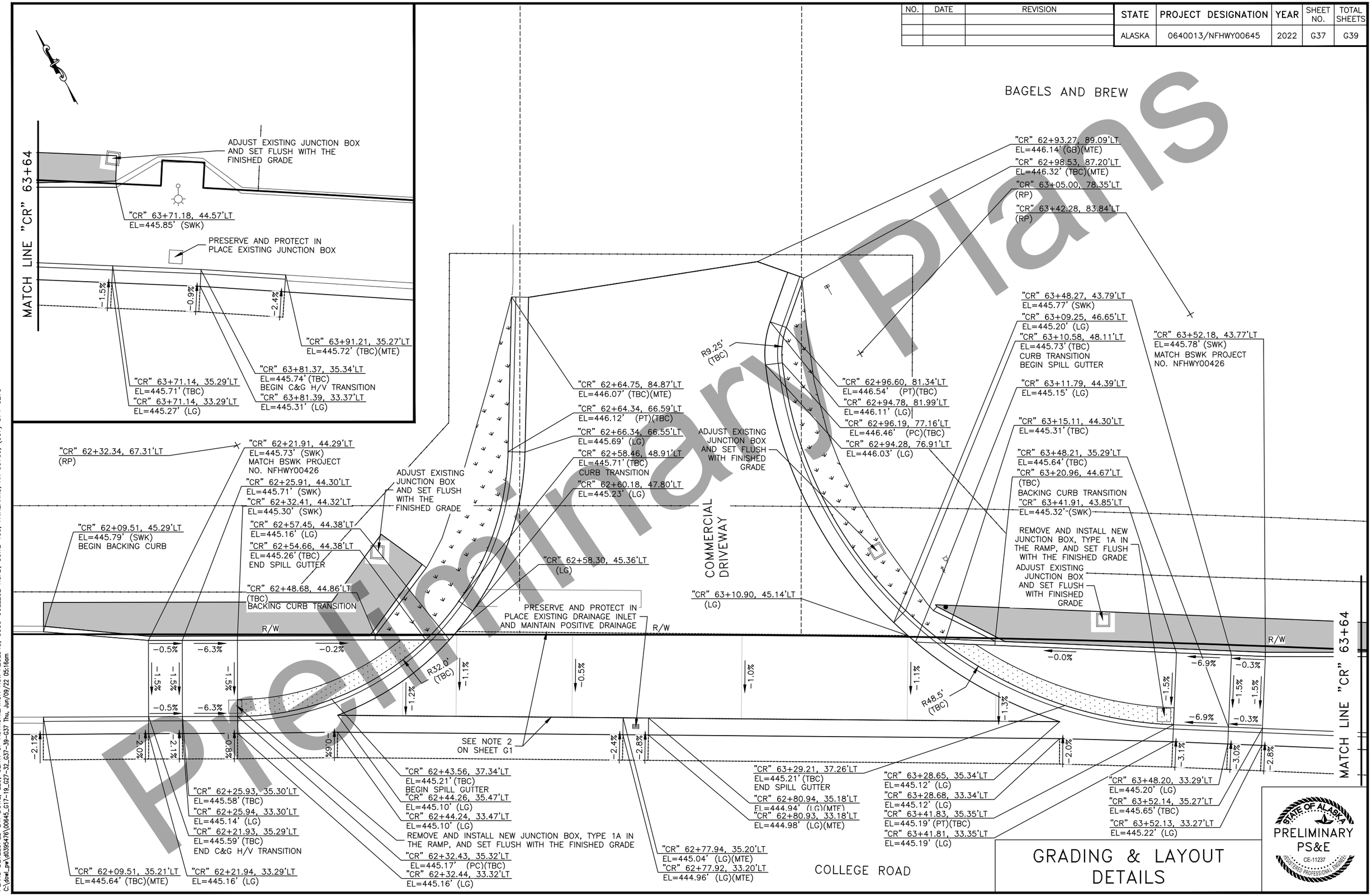
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G20-26_G33-36-G36 Thu, Jun/09/22 05:15am

NO.	DATE	REVISION

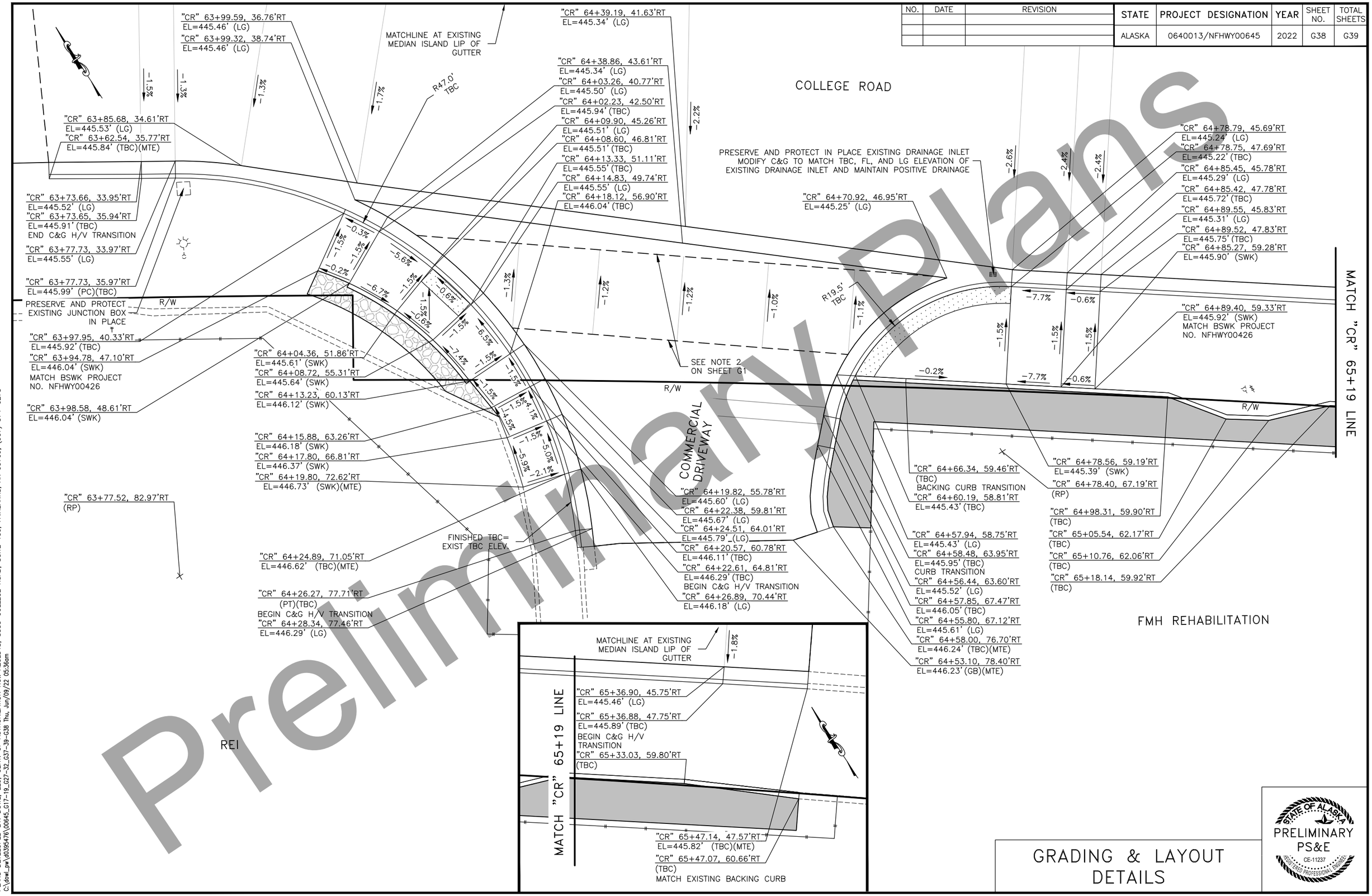
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G37	G39



PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G37 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G38	G39



Preliminary Plans

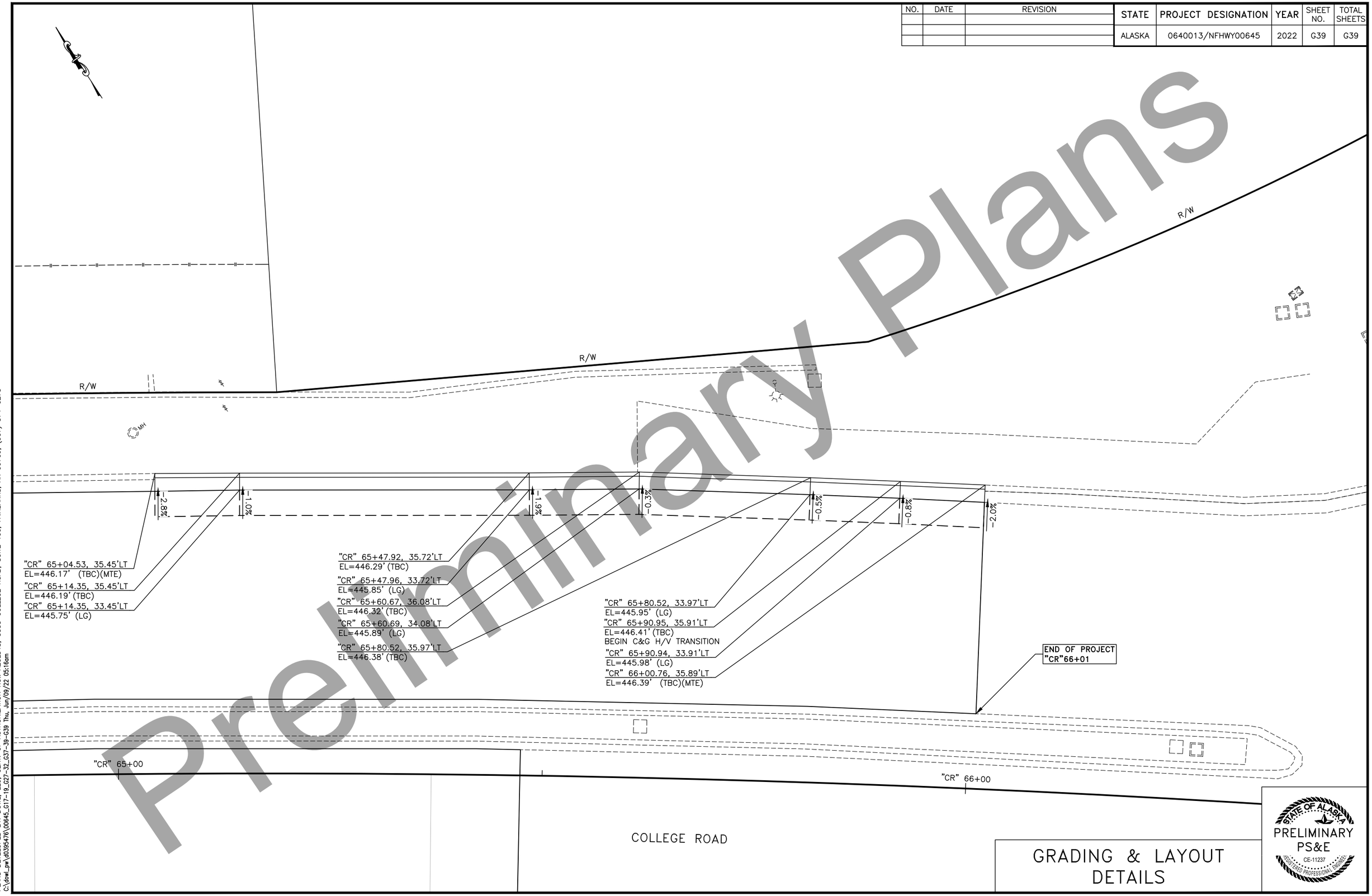
GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G38 Thu, Jun/09/22 05:36am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	G39	G39



Preliminary Plans

GRADING & LAYOUT DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_G17-19_G27-32_G37-39-G39 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H1	H24

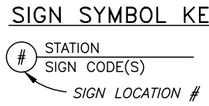
TRAFFIC MARKING NOTES

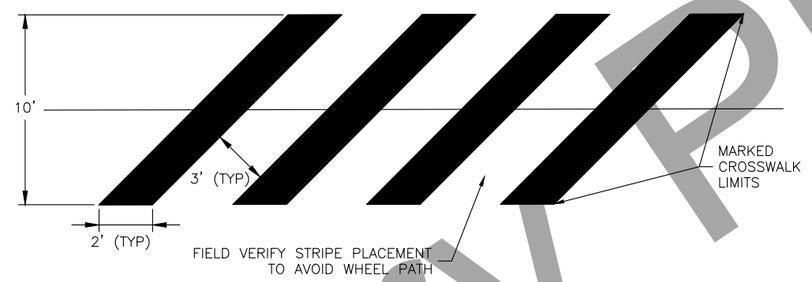
1. EXCEPT FOR PARKING STRIPING, ALL PROPOSED PAVEMENT MARKINGS SHALL BE INLAID METHYL METHACRYLATE (MMA).
2. BEGIN PAVEMENT MARKINGS BY INSTALLING THE INTERSECTION CROSSWALKS FIRST. LAYOUT THE CROSSWALKS IN ACCORDANCE WITH STANDARD PLAN T-23.01. FOR SKEWED INTERSECTIONS AND WHERE CURB RAMPS ARE LOCATED IN NON-STANDARD LOCATIONS AND INSTALLATION CALLED OUT IN PLANS, CENTER THE CROSSWALK STRIPING ON THE CURB RAMP.
3. TRANSITION NEW PAVEMENT MARKINGS TO MATCH EXISTING MARKINGS AT A 100:1 TAPER.
4. REMOVE ALL EXISTING PAVEMENT MARKINGS NOT COINCIDING WITH THE NEW MARKINGS.
5. DIMENSIONS REFER TO THE CENTER OF STRIPE, STRIPE GROUP, AND PAVEMENT EDGE.
6. AT MINOR SIDE STREETS, BREAK FOG LINE AT APPROACH RADII. DO NOT BREAK STRIPING AT DRIVEWAYS.
7. PAINT THE TOP AND FACE OF ALL RAMPED MEDIAN NOSES WITH 20 MILS OF SURFACE APPLIED YELLOW MMA MARKINGS.
8. STRIPING CONFIGURATIONS IN THIS PLAN SET ARE APPROXIMATE. THE CONTRACTOR SHALL PERFORM PRELIMINARY SPOTTING (RABBIT TRACKING) OF STRIPING AT LEAST 48 HOURS PRIOR TO APPLICATION OF MARKINGS. THE ENGINEER WILL THEN APPROVE THE LAYOUT OR MAKE MODIFICATIONS AS REQUIRED.

TRAFFIC MARKING KEY

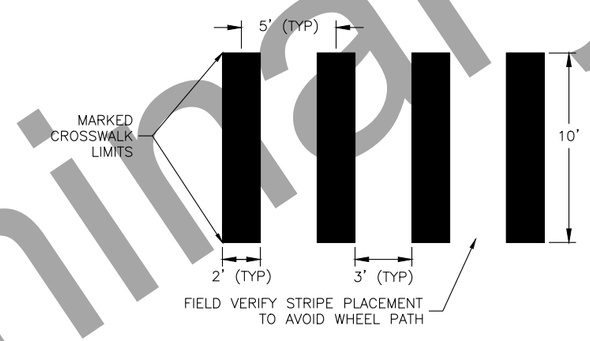
4"W	4" WHITE LINE
4"WS	4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
4"WD-1	4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
4"Y	4" YELLOW LINE
4"DY	4" DOUBLE YELLOW LINE
8"W	8" WHITE LINE
24"W	24" WHITE LINE
ASP	ALASKA STANDARD PLAN

SIGN SYMBOL KEY:



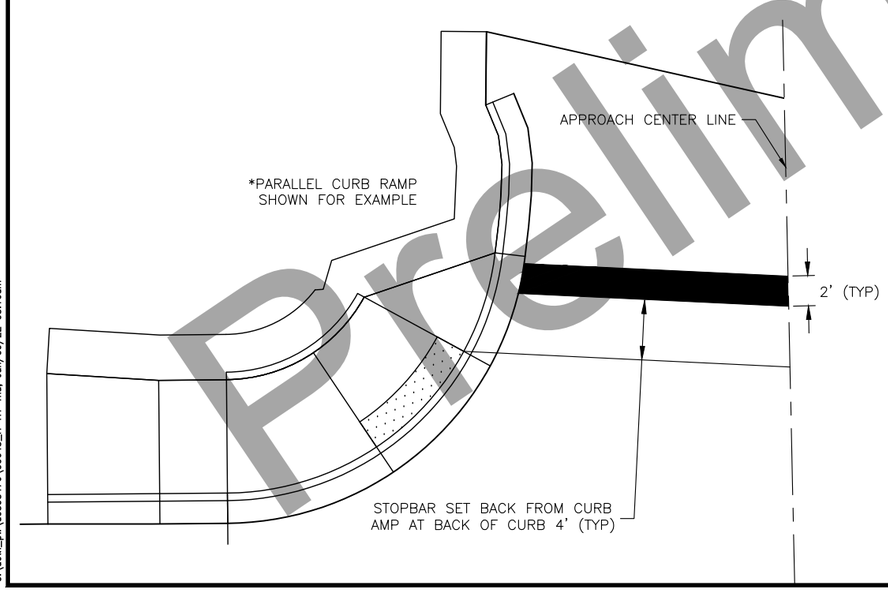


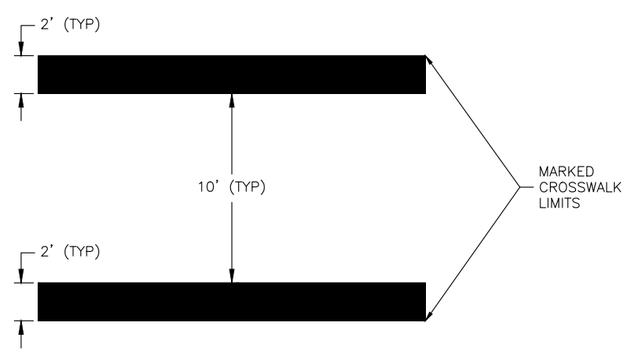
DETAIL A: SKEWED LONGITUDINAL CROSSWALK



DETAIL C: LONGITUDINAL CROSSWALK

DETAIL B: STOPBAR





DETAIL D: TRANSVERSE CROSSWALK

670.2002.0000 – MMA PAVEMENT MARKINGS, INLAID

DESCRIPTION	QUANTITY	UNIT	REMARKS
4"W	5,919	LF	
4"WS	8,017	LF	DOES NOT INCLUDE SKIPS
4"WD-1	1,839	LF	DOES NOT INCLUDE SKIPS
4"Y	3,879	LF	
4"DY	1,908	LF	TWO 4"Y STRIPES
8"W	4,541	LF	
TOTAL:	26,103	LF	
WHITE (W) CHEVRONS	622	SF	
24" W	5,619	SF	
WHITE (W) SOLID GORE STRIPE	750	SF	
YELLOW (Y) DIAGONALS	348	SF	
TURN ARROW	484	SF	
THROUGH AND RIGHT TURN ARROW	52	SF	
THROUGH ARROW	172	SF	
ONLY	21	SF	
RAILROAD "XX"	213	SF	
RAILROAD "RR"	30	SF	
TOTAL:	8,310	SF	

670.0013.0000 – PAINTED TRAFFIC MARKINGS

DESCRIPTION	QUANTITY	UNIT	REMARKS
4"W	33.5	LF	
TOTAL:	33.5	LF	
PAY ITEM QUANTITY	34.0	LF	

670.2000.0000 – MMA PAVEMENT MARKINGS

DESCRIPTION	QUANTITY	UNIT	REMARKS
YELLOW (Y) CURB NOSES	192	SF	
TOTAL:	192	SF	

Preliminary Plans

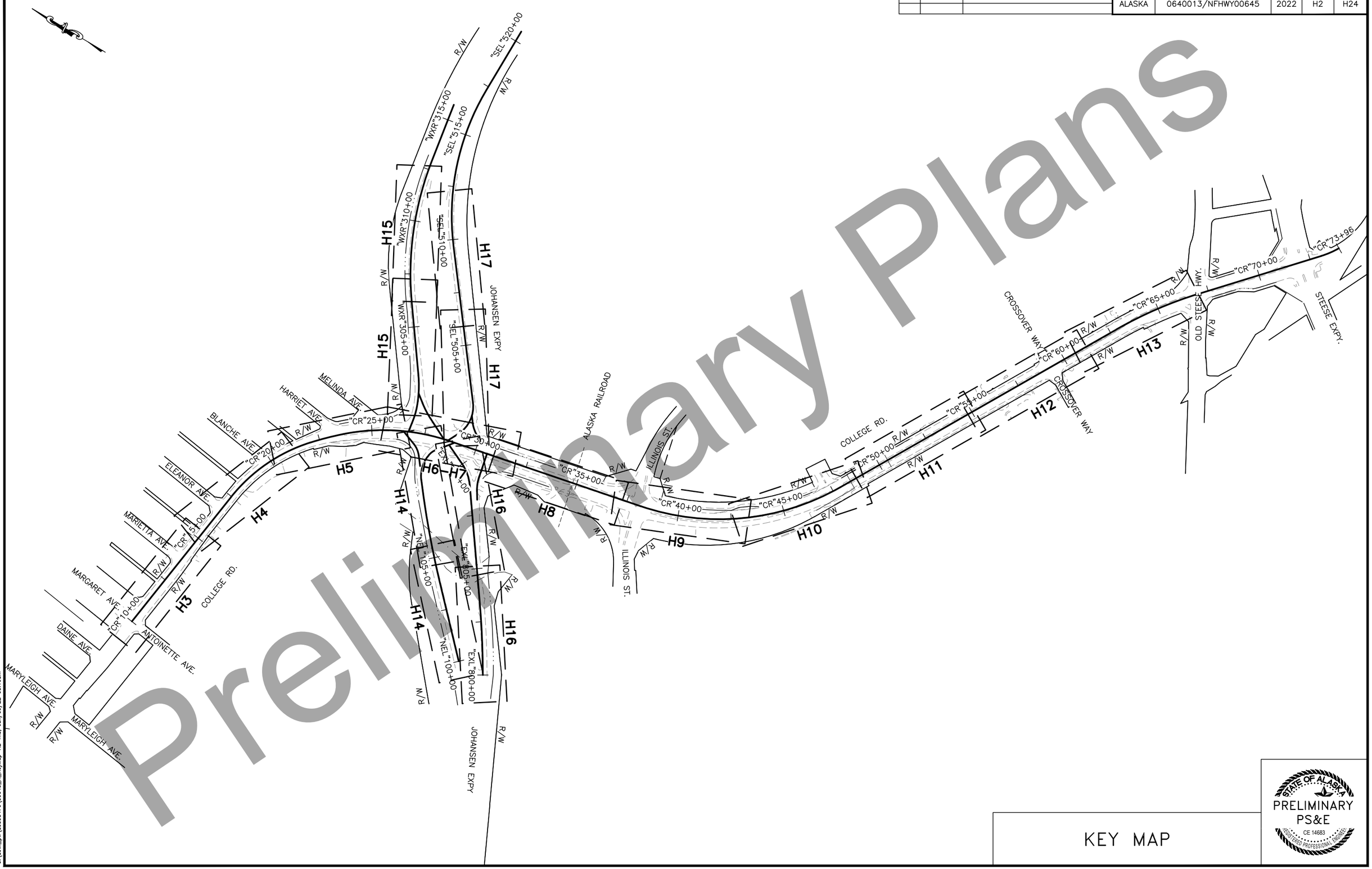
STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

TRAFFIC LEGEND AND NOTES

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\0395476\00645_H-H1 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H2	H24



Preliminary Plans

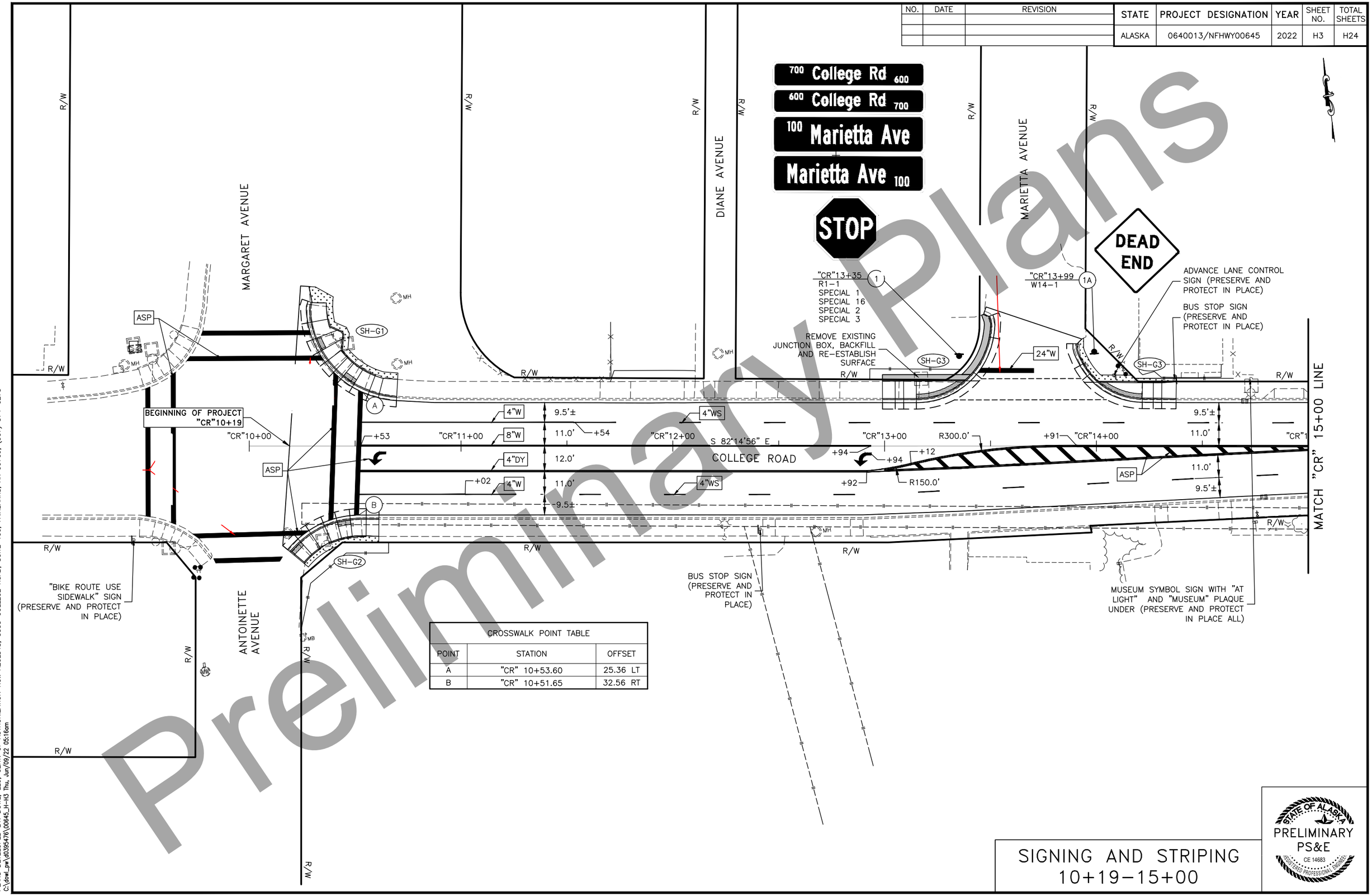
KEY MAP

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H_KeyMap-H2 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H3	H24



CROSSWALK POINT TABLE

POINT	STATION	OFFSET
A	"CR" 10+53.60	25.36 LT
B	"CR" 10+51.65	32.56 RT

SIGNING AND STRIPING 10+19–15+00

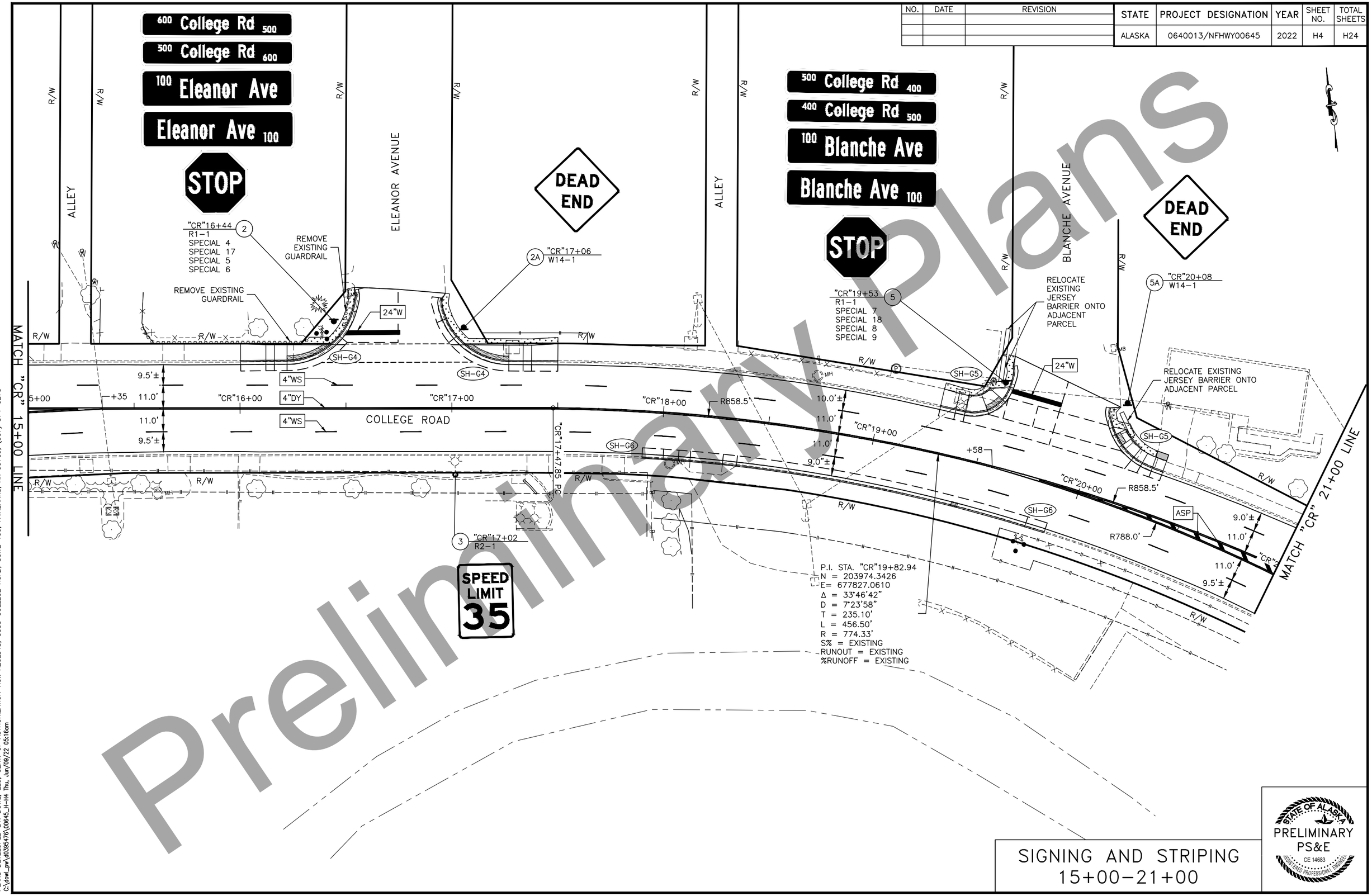
STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H3 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H4	H24



SIGNING AND STRIPING
15+00–21+00

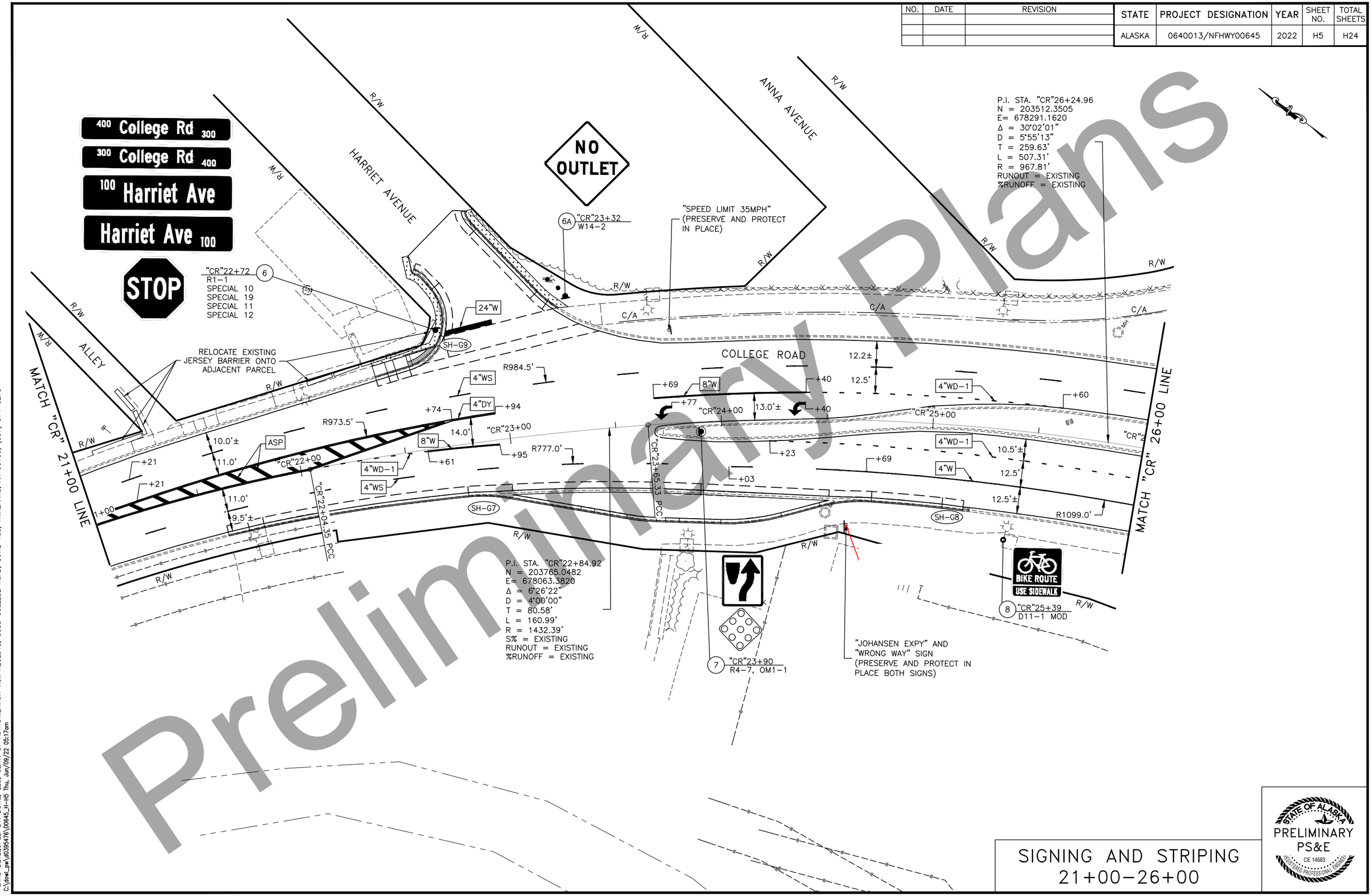
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H4 Thu, Jun/09/22 05:16am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H5	H24



Preliminary Plans

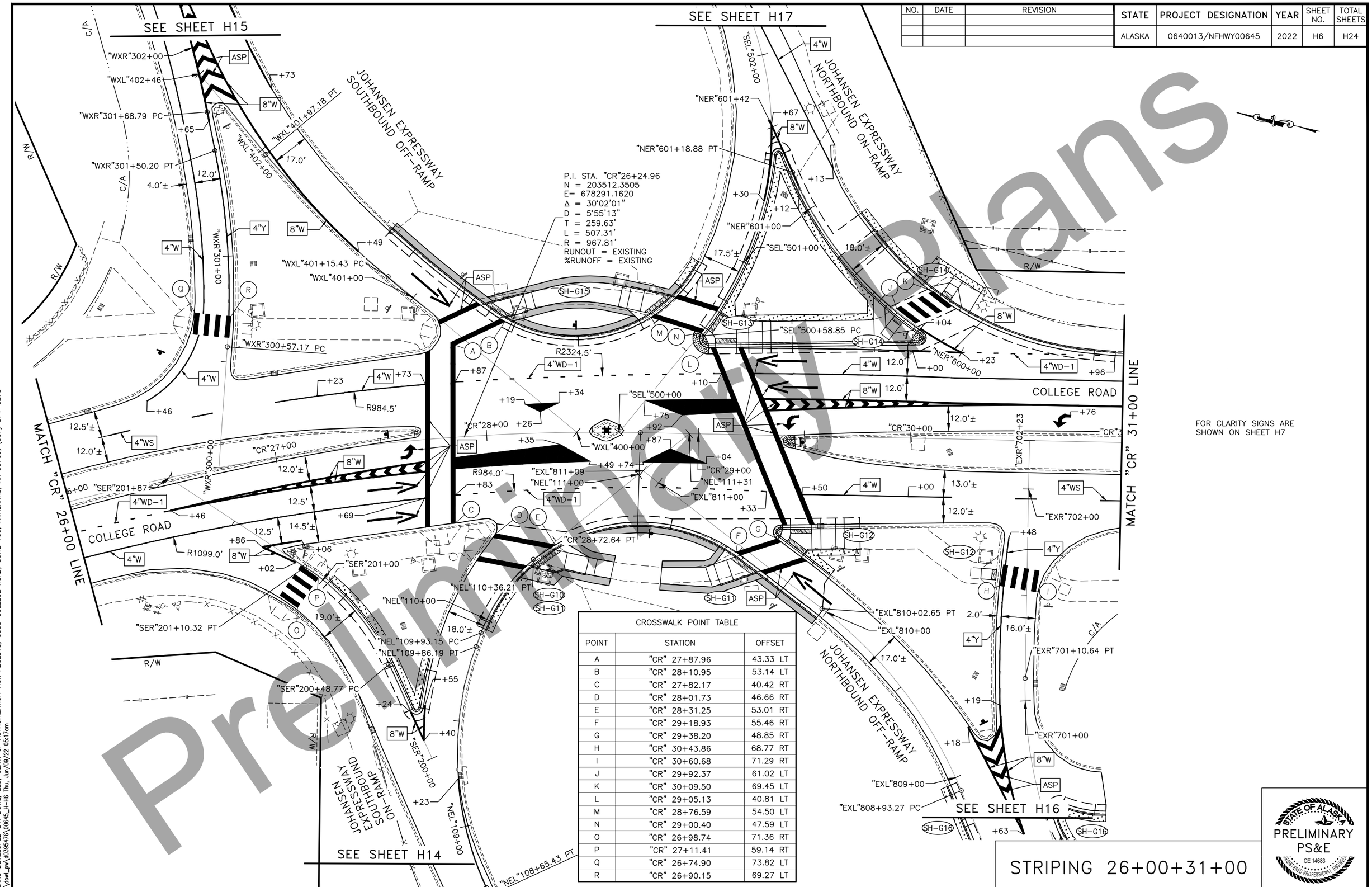
SIGNING AND STRIPING
21+00–26+00

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
LICENSED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H5 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H6	H24



CROSSWALK POINT TABLE

POINT	STATION	OFFSET
A	"CR" 27+87.96	43.33 LT
B	"CR" 28+10.95	53.14 LT
C	"CR" 27+82.17	40.42 RT
D	"CR" 28+01.73	46.66 RT
E	"CR" 28+31.25	53.01 RT
F	"CR" 29+18.93	55.46 RT
G	"CR" 29+38.20	48.85 RT
H	"CR" 30+43.86	68.77 RT
I	"CR" 30+60.68	71.29 RT
J	"CR" 29+92.37	61.02 LT
K	"CR" 30+09.50	69.45 LT
L	"CR" 29+05.13	40.81 LT
M	"CR" 28+76.59	54.50 LT
N	"CR" 29+00.40	47.59 LT
O	"CR" 26+98.74	71.36 RT
P	"CR" 27+11.41	59.14 RT
Q	"CR" 26+74.90	73.82 LT
R	"CR" 26+90.15	69.27 LT

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

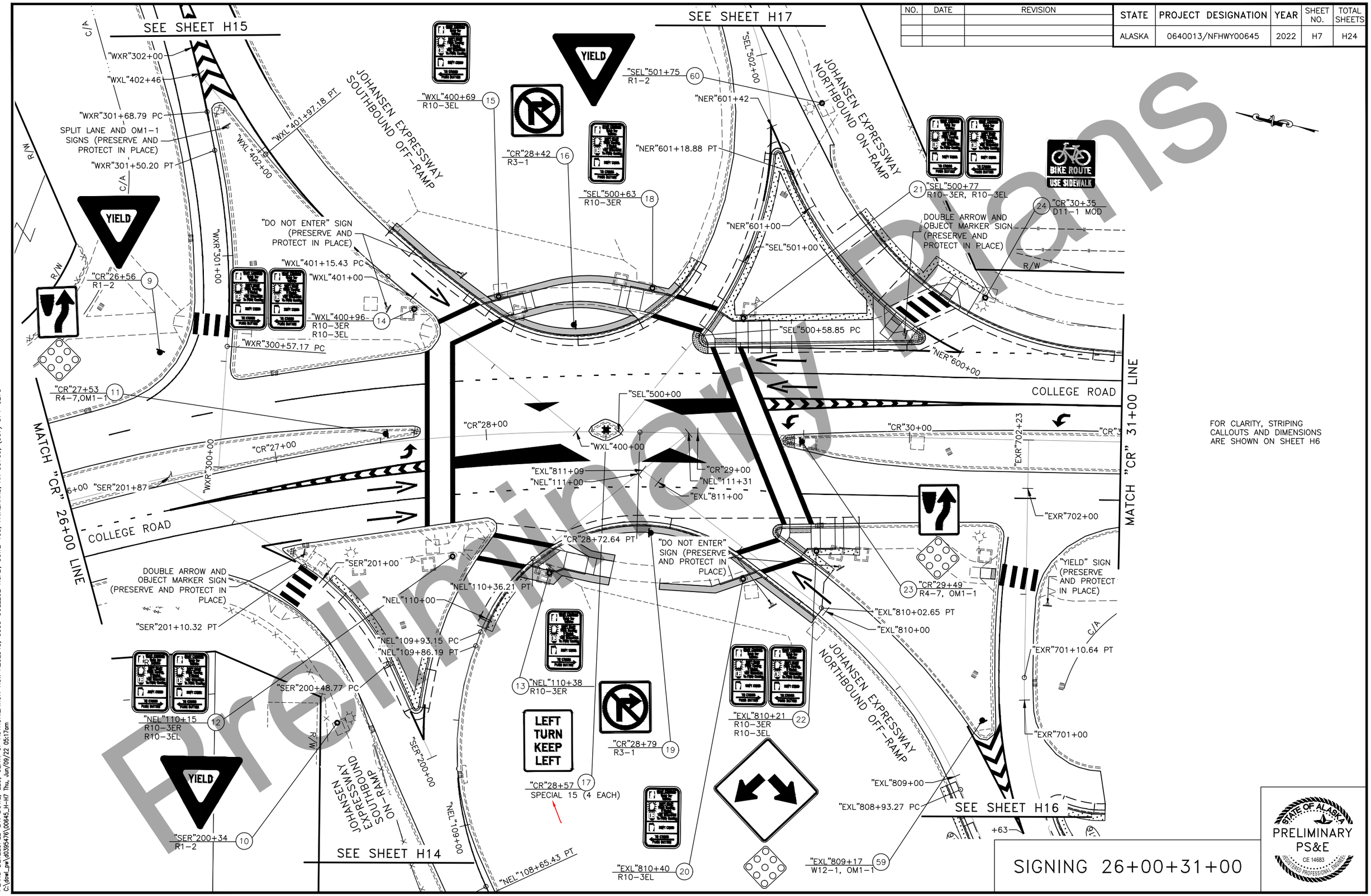
STRIPING 26+00+31+00

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H6 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H7	H24



FOR CLARITY, STRIPING CALLOUTS AND DIMENSIONS ARE SHOWN ON SHEET H6

SIGNING 26+00+31+00

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

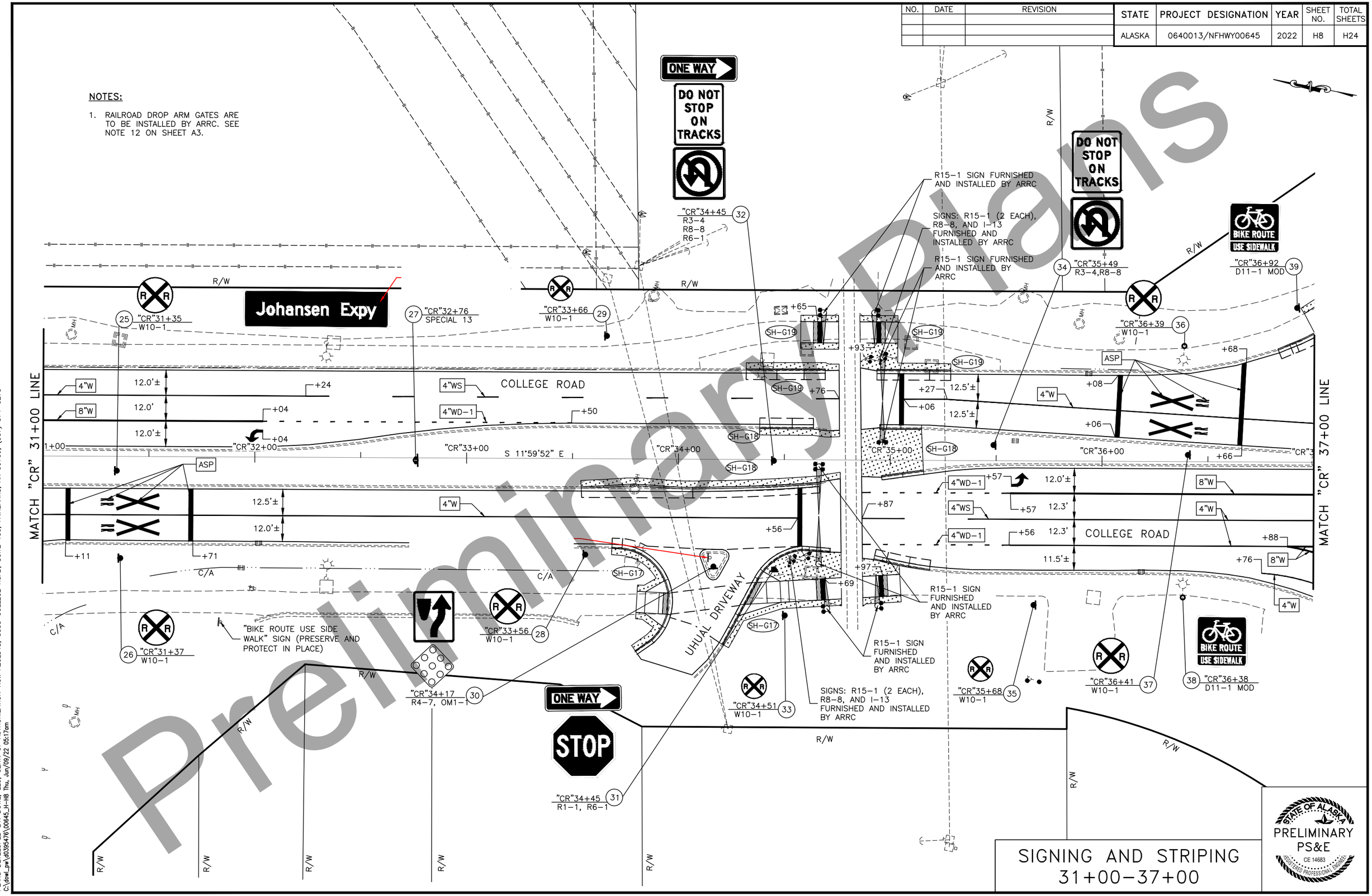
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H7 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H8	H24

NOTES:

1. RAILROAD DROP ARM GATES ARE TO BE INSTALLED BY ARRC. SEE NOTE 12 ON SHEET A3.



SIGNING AND STRIPING
31+00-37+00

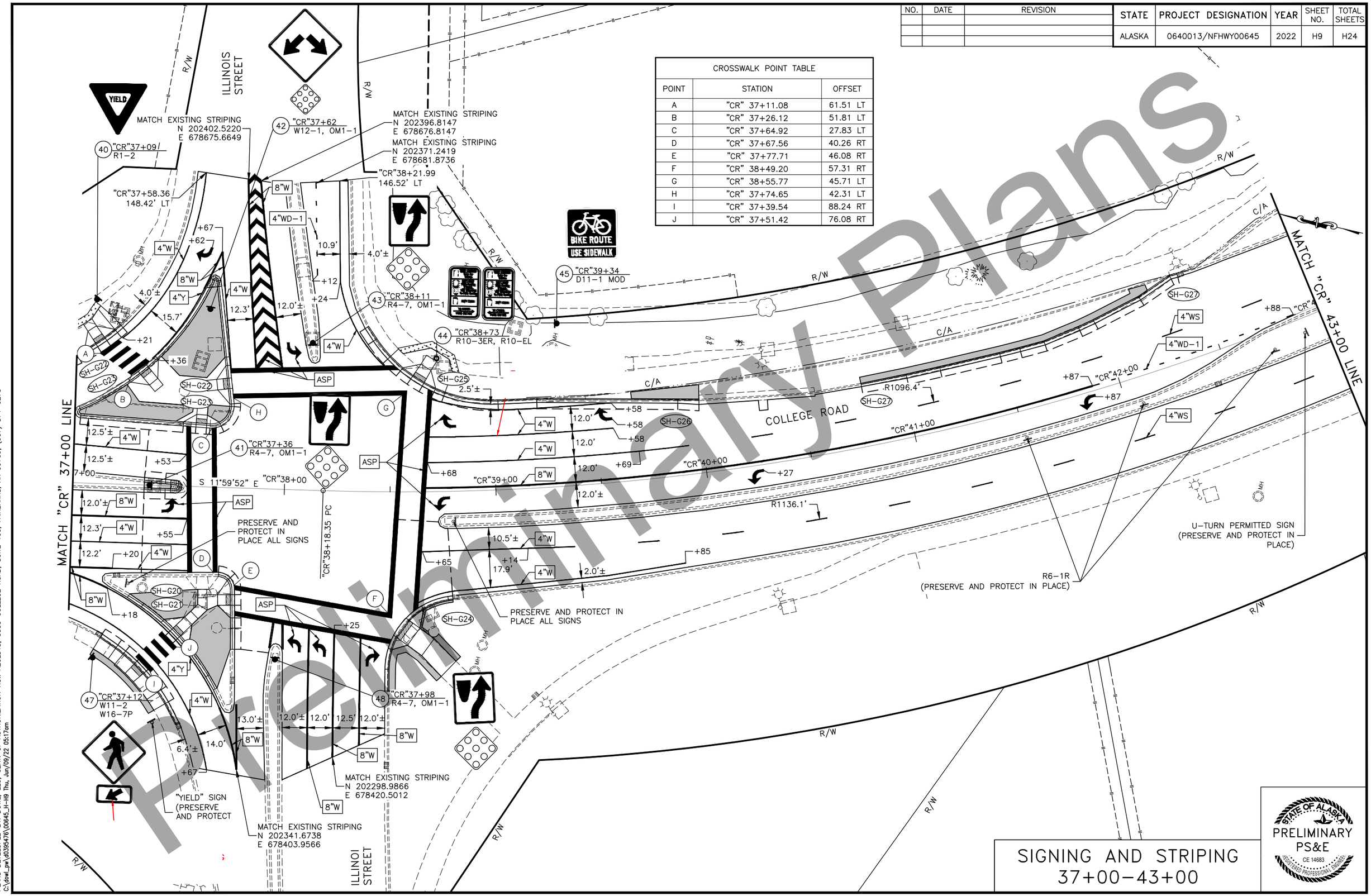
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H8 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H9	H24



CROSSWALK POINT TABLE

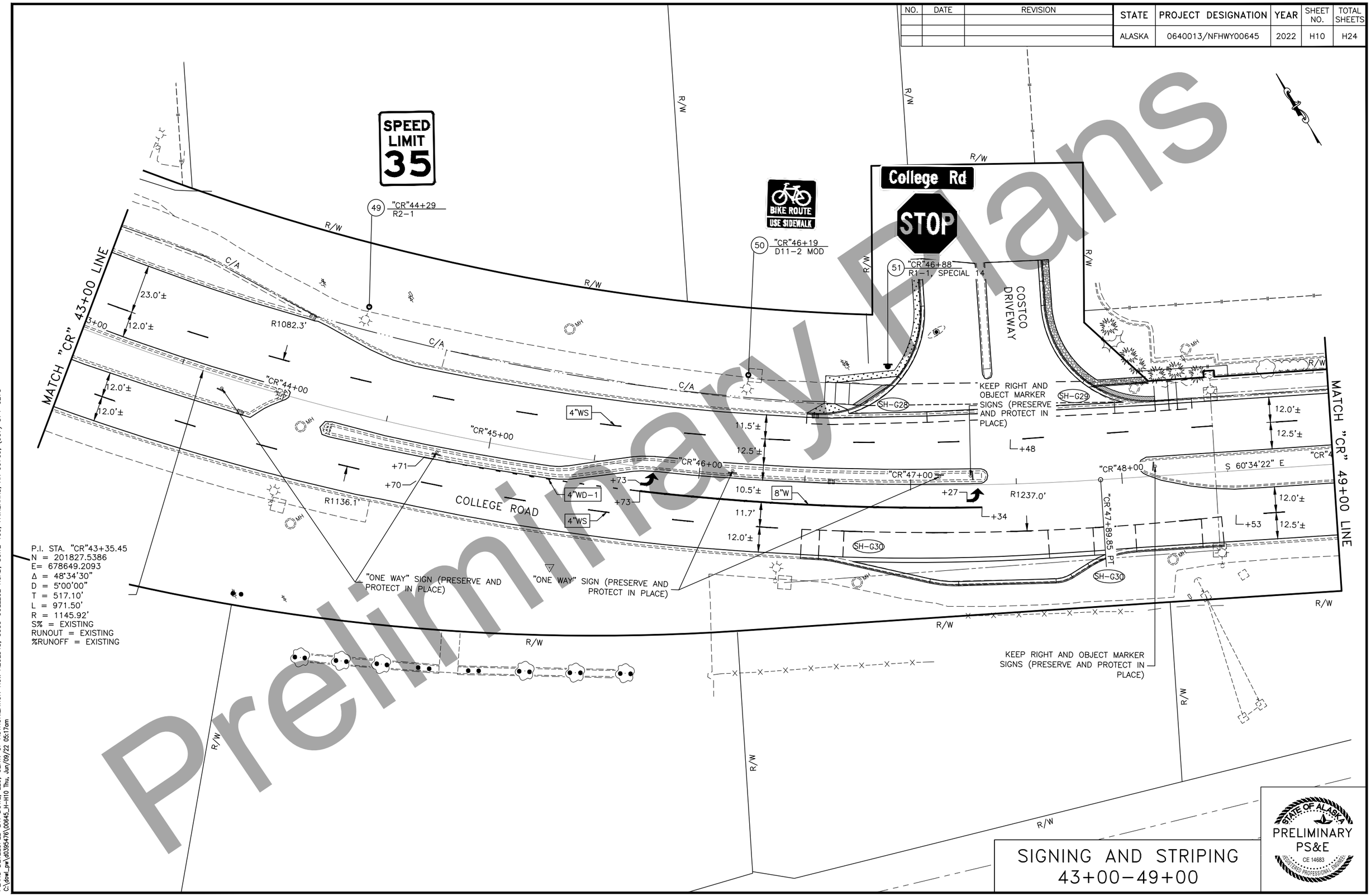
POINT	STATION	OFFSET
A	"CR" 37+11.08	61.51 LT
B	"CR" 37+26.12	51.81 LT
C	"CR" 37+64.92	27.83 LT
D	"CR" 37+67.56	40.26 RT
E	"CR" 37+77.71	46.08 RT
F	"CR" 38+49.20	57.31 RT
G	"CR" 38+55.77	45.71 LT
H	"CR" 37+74.65	42.31 LT
I	"CR" 37+39.54	88.24 RT
J	"CR" 37+51.42	76.08 RT

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H9 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H10	H24



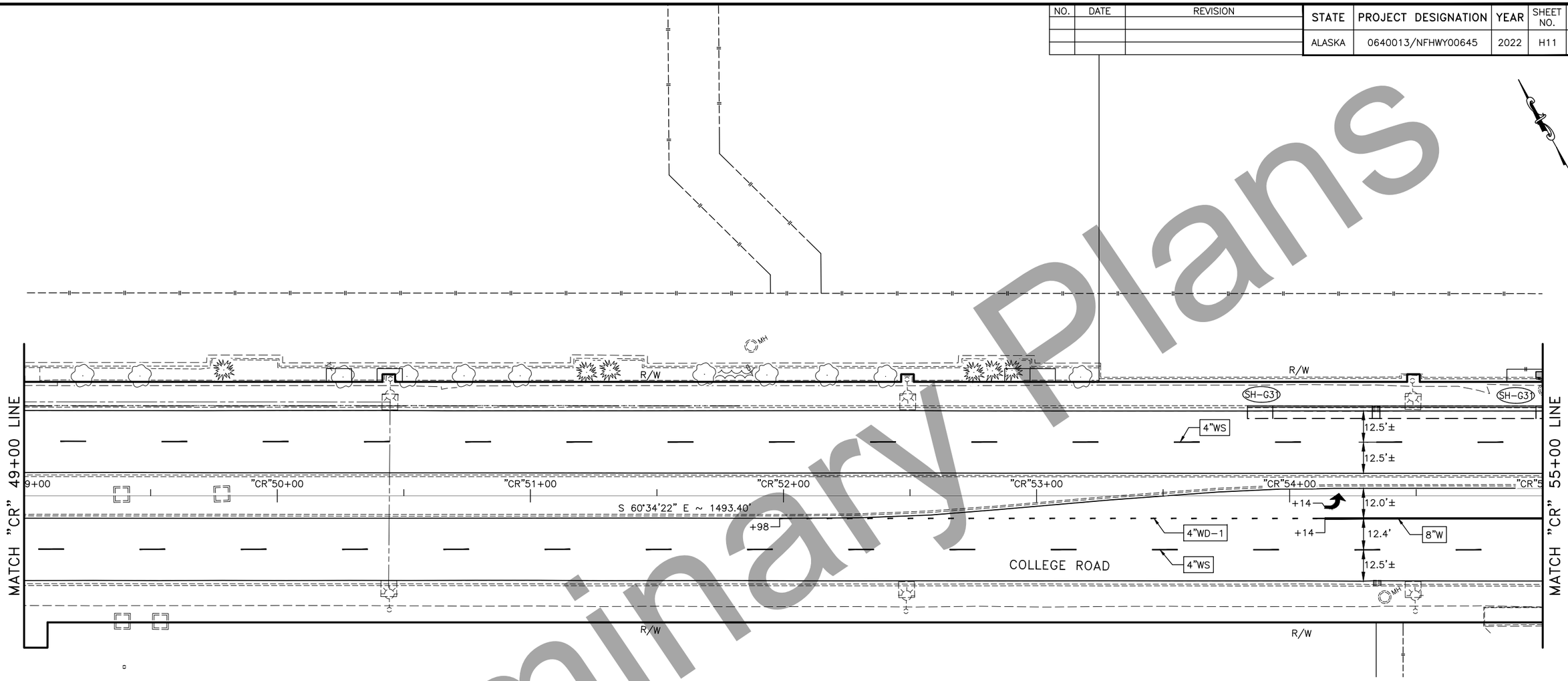
SIGNING AND STRIPING
43+00–49+00

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H10 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H11	H24



Preliminary Plans

SIGNING AND STRIPING
49+00–55+00

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

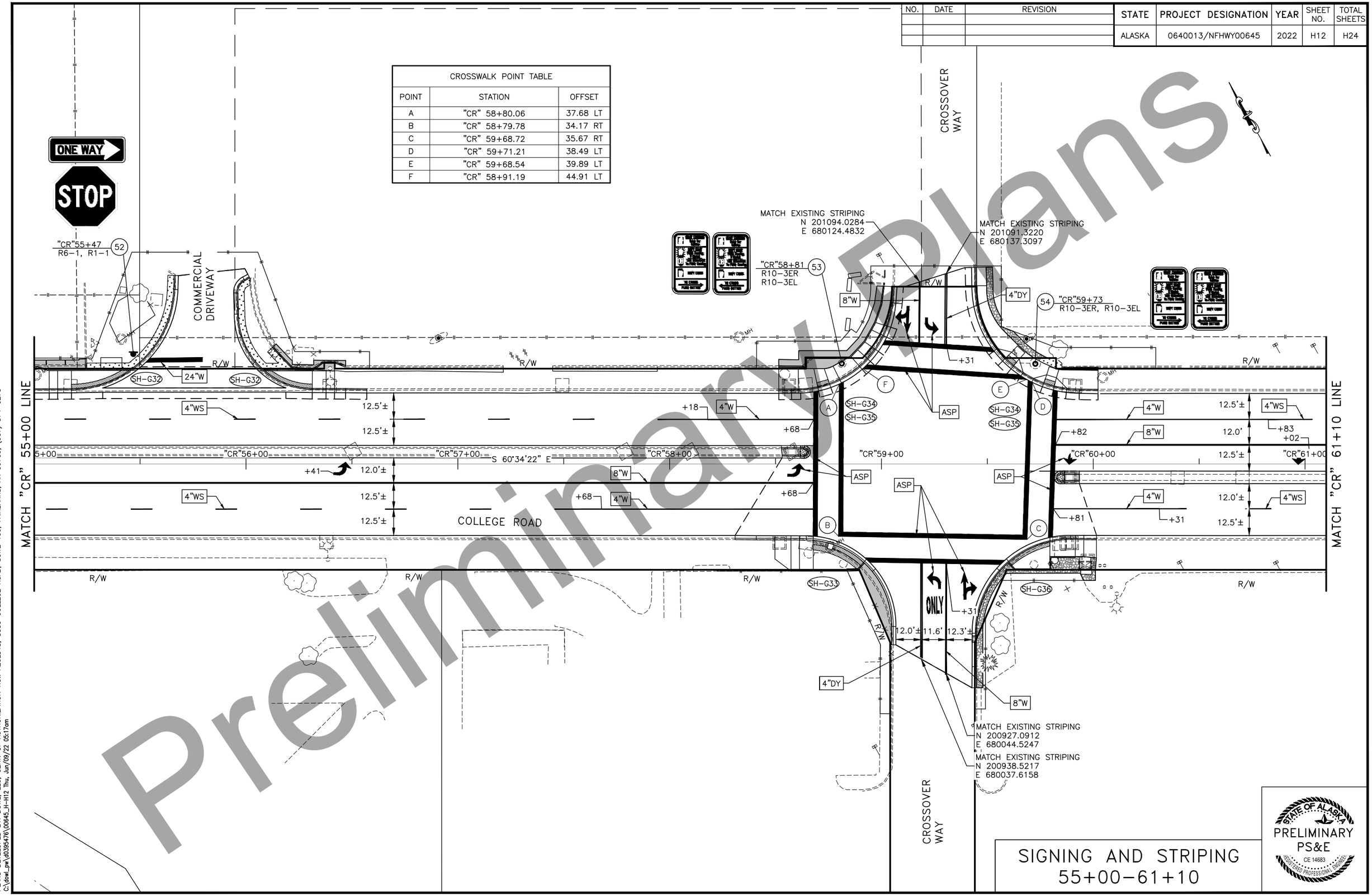
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H11 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H12	H24

CROSSWALK POINT TABLE

POINT	STATION	OFFSET
A	"CR" 58+80.06	37.68 LT
B	"CR" 58+79.78	34.17 RT
C	"CR" 59+68.72	35.67 RT
D	"CR" 59+71.21	38.49 LT
E	"CR" 59+68.54	39.89 LT
F	"CR" 58+91.19	44.91 LT



Preliminary Plans

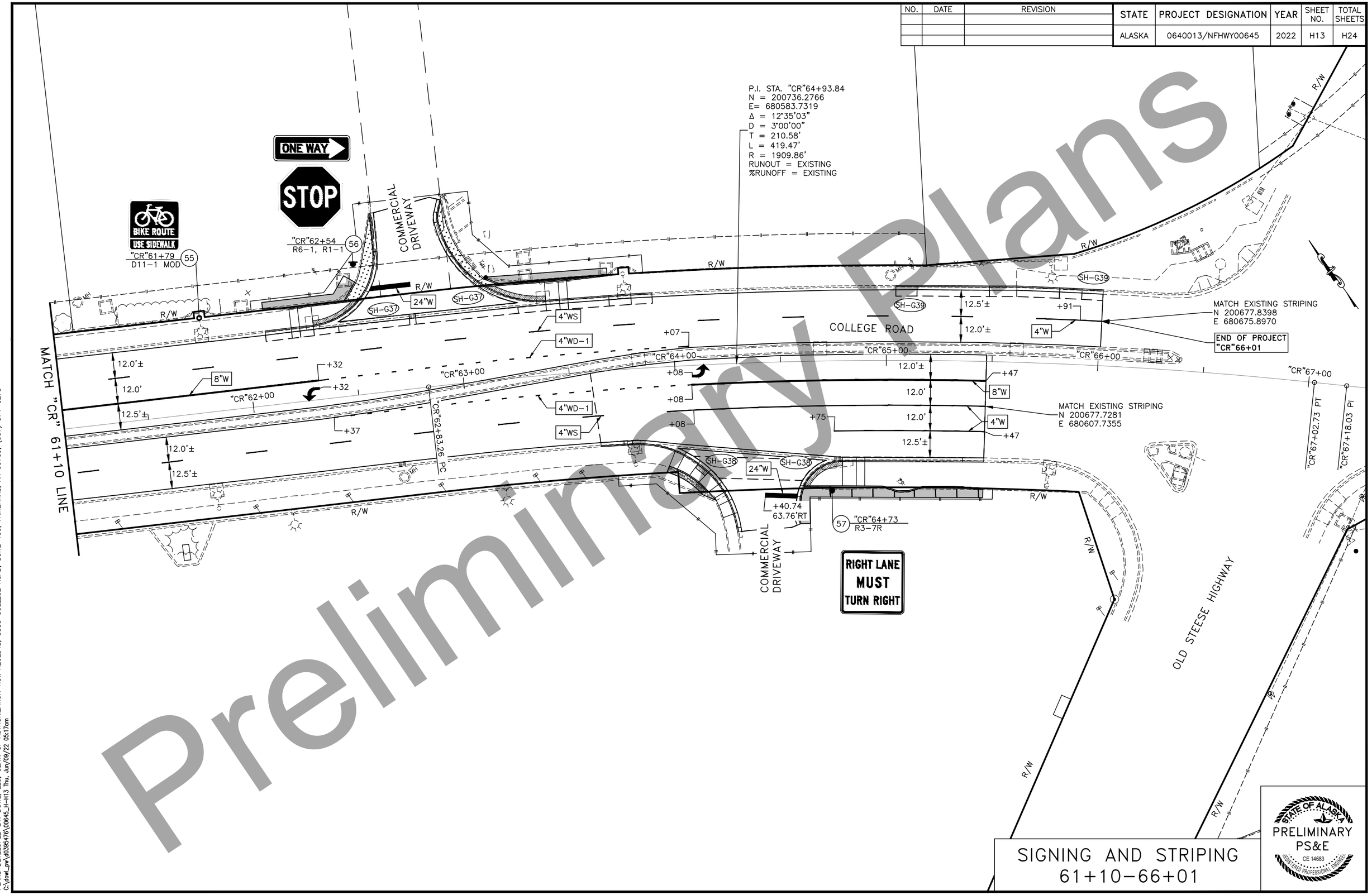
SIGNING AND STRIPING
55+00–61+10

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H12 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H13	H24

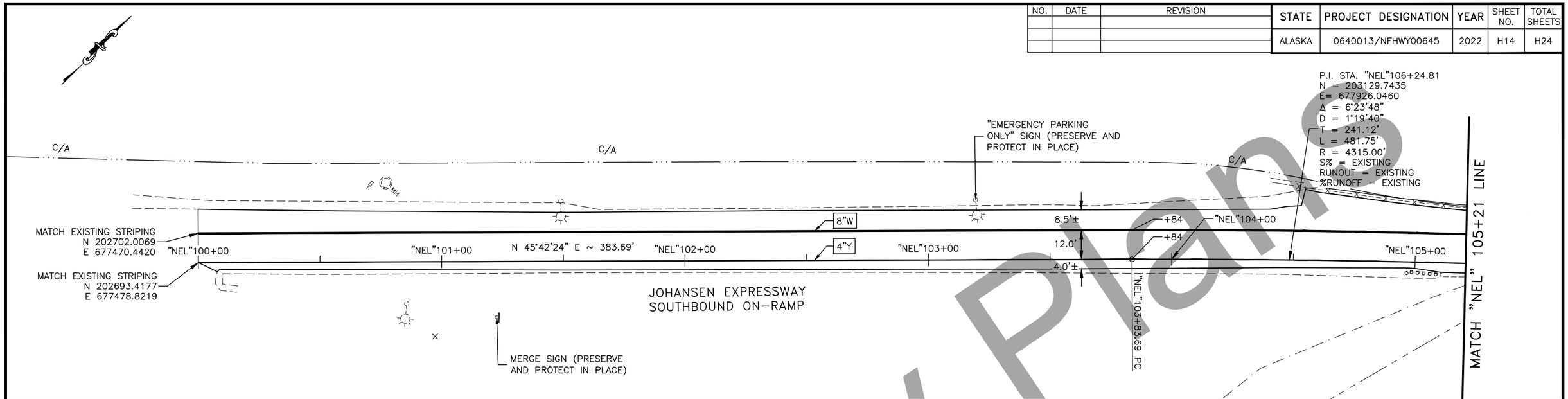


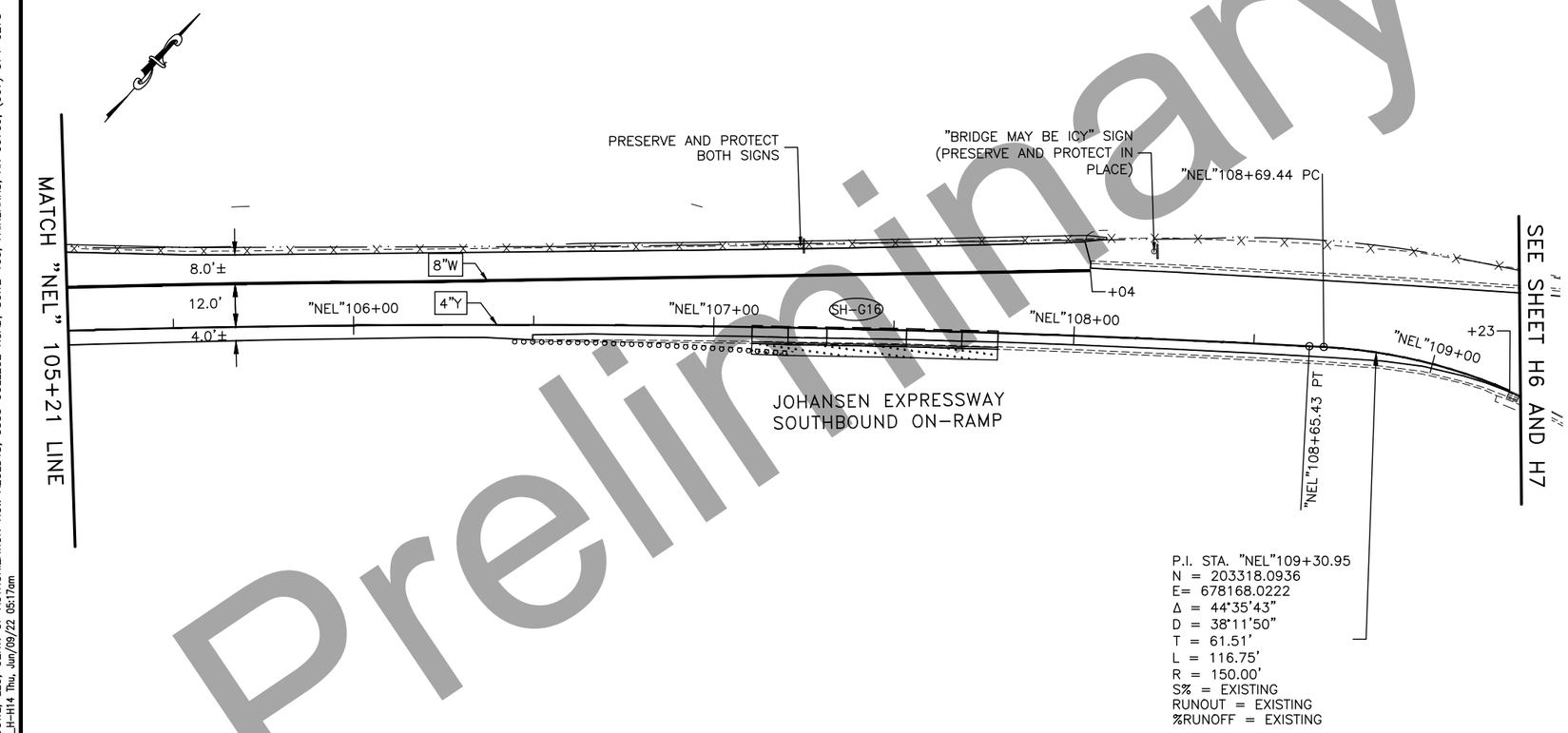
SIGNING AND STRIPING
61+10–66+01

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H13 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H14	H24





SIGNING AND STRIPING
100+00–109+93

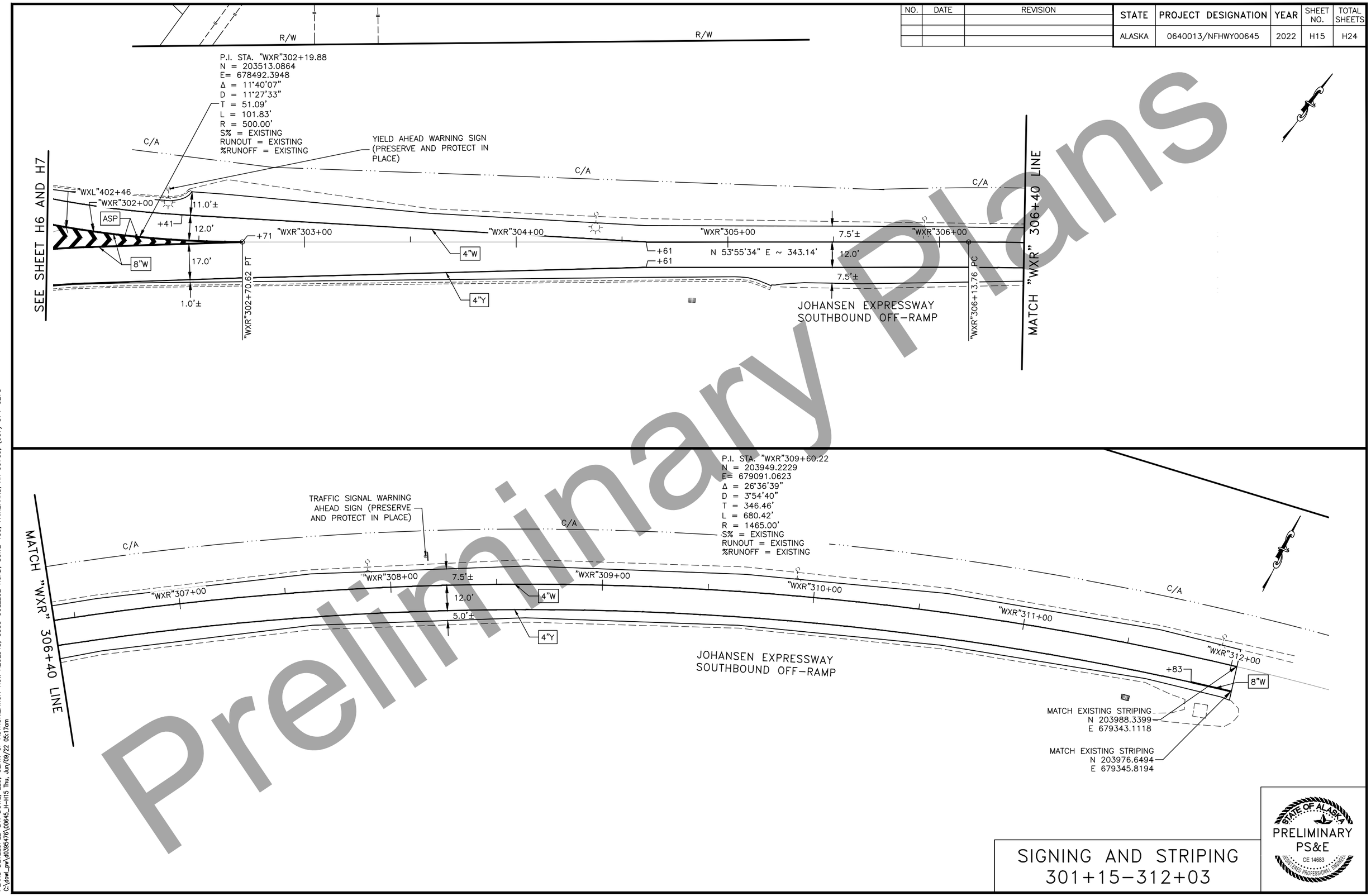
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H14 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H15	H24



Preliminary Plans

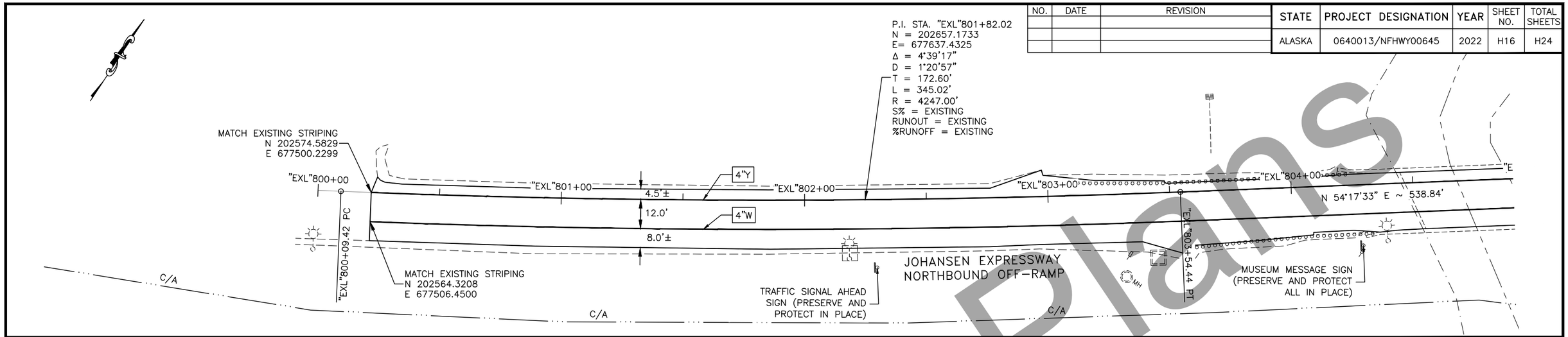
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

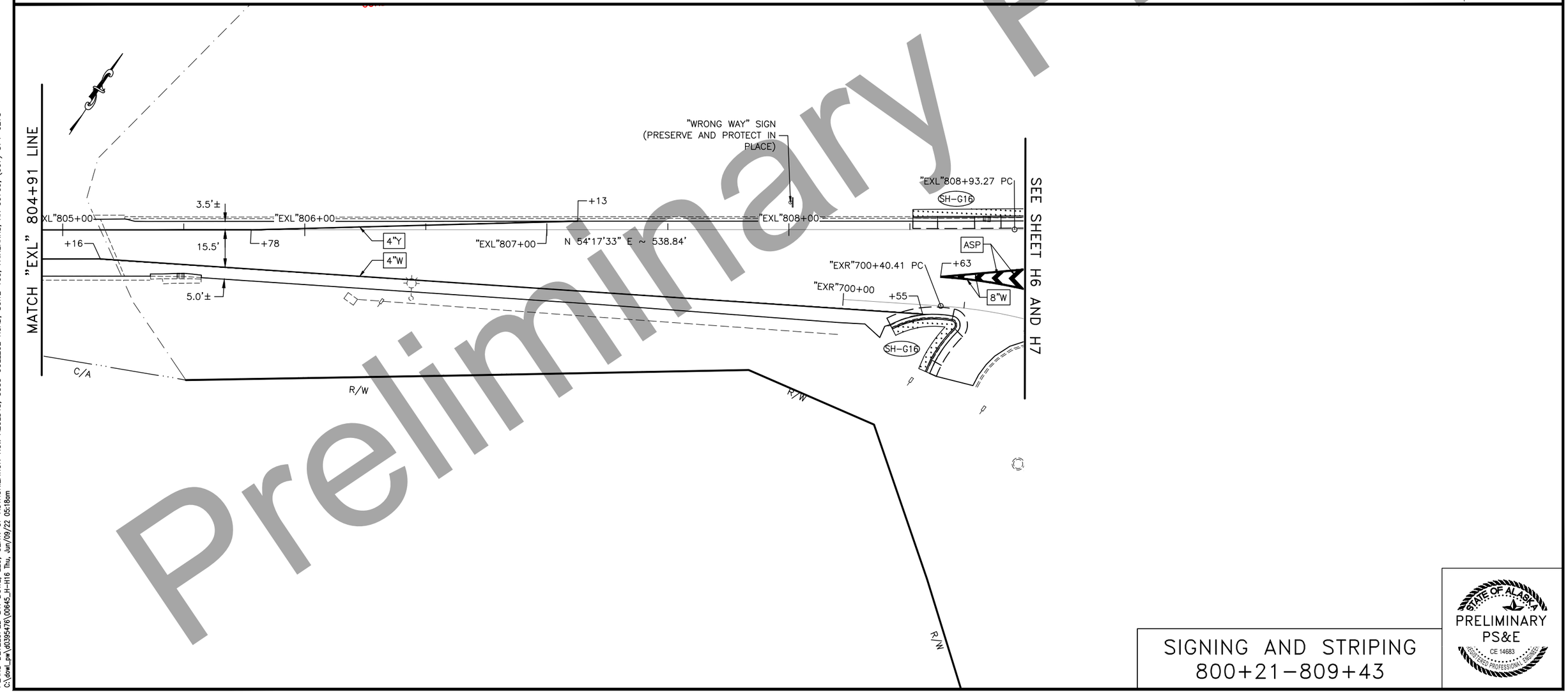
SIGNING AND STRIPING
301+15–312+03

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H15 Thu, Jun/09/22 05:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H16	H24





SIGNING AND STRIPING
800+21–809+43

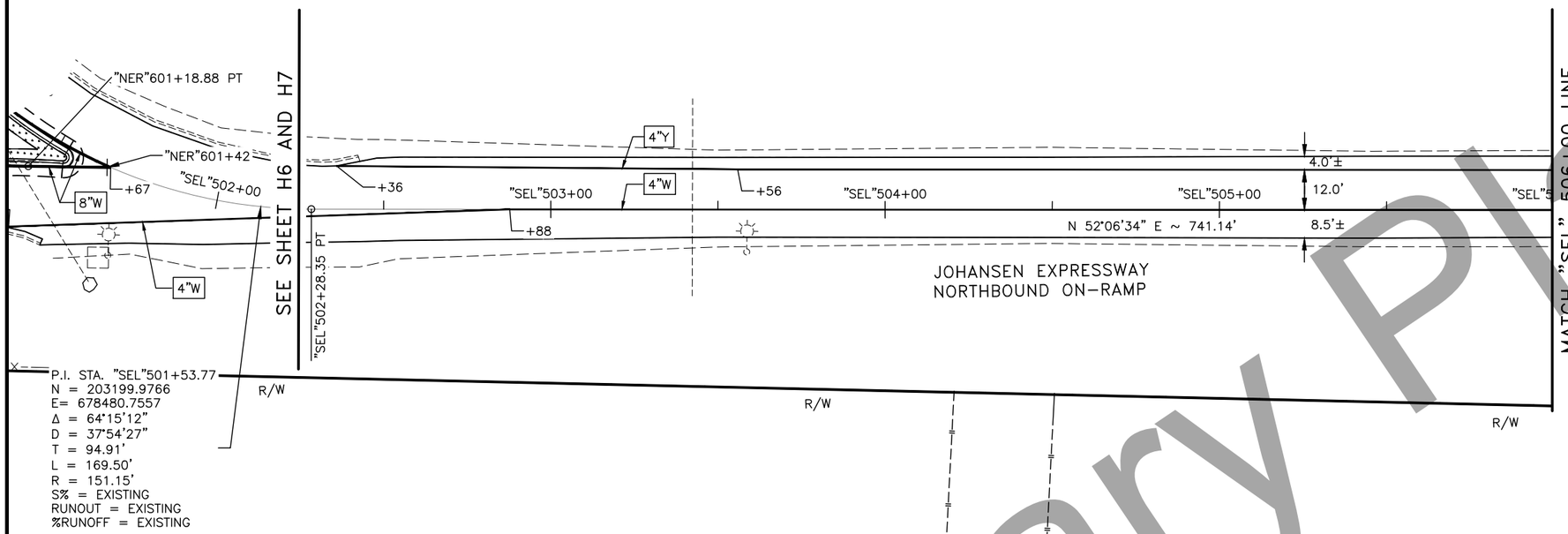
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

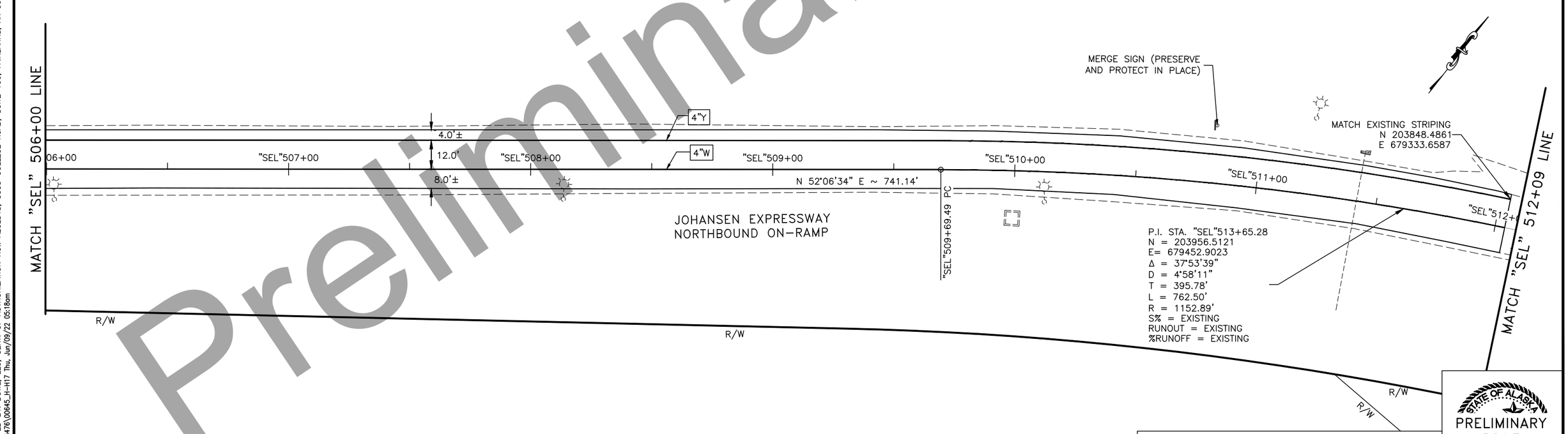
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H16 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H17	H24





SIGNING AND STRIPING
501+00–512+09

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H17 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H18	H24

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
1	"CR" 13+35	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	SALVAGE SIGN (5 EA)
				SPECIAL 1	MARIETTA AVE 100	48 X 12	X		4.00		E				
				SPECIAL 16	100 MARIETTA AVE	48 X 12	X		4.00		W				
				SPECIAL 2	600 COLLEGE RD 700	48 X 8	X		2.67		N				
				SPECIAL 3	700 COLLEGE RD 600	48 X 8	X		2.67		S				
2	"CR" 16+44	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	SALVAGE SIGN (5 EA)
				SPECIAL 4	ELEANOR AVE 100	48 X 12	X		4.00		E				
				SPECIAL 17	100 ELEANOR AVE	48 X 12	X		4.00		W				
				SPECIAL 5	500 COLLEGE RD 600	48 X 8	X		2.67		N				
				SPECIAL 6	600 COLLEGE RD 500	48 X 8	X		2.67		S				
3	"CR" 17+02		X	R2-1	SPEED LIMIT 35	30 X 36	X		7.50		W				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
2A	"CR" 17+06	X		W14-1	DEAD END	36 X 36	X		9.00		S	PST	2.5	1	SALVAGE SIGN
5	"CR" 19+53	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	SALVAGE SIGN (5 EA)
				SPECIAL 7	BLANCHE AVE 100	48 X 12	X		4.00		E				
				SPECIAL 18	100 BLANCHE AVE	48 X 12	X		4.00		W				
				SPECIAL 8	400 COLLEGE RD 500	48 X 8	X		2.67		N				
				SPECIAL 9	500 COLLEGE RD 400	48 X 8	X		2.67		S				
6	"CR" 22+72	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	SALVAGE SIGN (5 EA)
				SPECIAL 10	HARRIET AVE 100	48 X 12	X		4.00		E				
				SPECIAL 19	100 HARRIET AVE	48 X 12	X		4.00		W				
				SPECIAL 11	300 COLLEGE RD 400	48 X 8	X		2.67		N				
				SPECIAL 12	400 COLLEGE RD 300	48 X 8	X		2.67		S				
7	"CR" 23+90		X	R4-7	KEEP RIGHT	24 X 30			5.00		NW	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
8	"CR" 25+39		X	D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		W				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
9	"CR" 26+56	X		R1-2	YIELD	36 X 36	X		9.00		E	PST	2.5	1	SALVAGE SIGN (1 EA)
10	"SER" 200+34	X		R1-2	YIELD	36 X 36	X		9.00		NW				MOUNT ON ELECTROLIER, SALVAGE SIGN (1 EA)
11	"CR" 27+53	X		R4-7	KEEP RIGHT	24 X 30			5.00		S	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
12	"NEL" 110+15	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		NE				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		S				
13	"NEL" 110+38		X	R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		NE				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (1 EA)
14	"WXL" 400+96	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		W				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		S				
15	"WXL" 400+69		X	R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		W				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (1 EA)

NOTES:

1. MOUNTING HEIGHTS ARE PER STANDARD PLAN S-05.02.
2. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
3. INSTALL PST SIGN POSTS WITH SLEEVE TYPE CONCRETE FOUNDATION PER STANDARD PLAN S-30.05. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHERS, AND TWO FLAT WASHERS.
4. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
5. STOP (R1-1) AND YIELD (R1-2) SIGN LOCATIONS, ESPECIALLY THOSE AT LARGE RADIUS INTERSECTION, MAY NEED ADJUSTMENT IN THE FIELD. THE ENGINEER SHALL APPROVE FINAL LOCATIONS.
6. LOCATE AND PROTECT ALL EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
7. DELIVER SALVAGED SIGN PANELS, NOT IDENTIFIED FOR REUSE IN THE SIGNING SUMMARY, TO THE DOT&PF FAIRBANKS MAINTENANCE YARD LOCATED AT 2301 PEGER ROAD. CONTACT DANIEL SCHACHER (907) 451-5276 TO ARRANGE FOR DELIVERY.
8. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITION.
9. SALVAGED SIGNS BELONGING TO THE ALASKA RAILROAD CORPORATION SHALL BE DELIVERED TO AN AUTHORIZED AKRRC REPRESENTATIVE, CONTACT RACHEL MADDY AT (907) 265-2237 TO ARRANGE FOR DELIVERY.
10. SIGN LOCATION INDICATED ON PLANS AND SUMMARY TABLES ARE APPROXIMATE AND SUBJECT TO FIELD ADJUSTMENT BY THE ENGINEER. THE CONTRACTOR IS REQUIRED TO MARK THE PROPOSED LOCATIONS AND TO NOTIFY THE PROJECT ENGINEER OF THESE LOCATIONS A MINIMUM OF 96 HOURS PRIOR TO INSTALLATION. LICENSED SURVEYOR TO DETERMINE THE PROPOSED SIGN LOCATION IS NOT REQUIRED.
11. SALVAGE ALL SIGNS NOTED IN THE SIGNING SUMMARY REMARKS COLUMN. SALVAGE SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
W_X_ = WIDE FLANGE

SIGNING SUMMARY

STATE OF ALASKA
PRELIMINARY
PS&E
CE-14883
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H_Sign Summary-H18 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H19	H24

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
16	"CR" 28+42	X		R3-1	RIGHT TURN PROHIBITED	36 X 36	X		9.00		S	PST	2.5	1	SALVAGE SIGN (1 EA)
17	"CR" 28+57	X		SPECIAL 15	LEFT TURN KEEP LEFT	24 X 30			5.00		SW				USE EXISTING POST, REPLACE SIGN, BRACING, AND FRAMING PER ASP. SALVAGE SIGN (4 EA)
					LEFT TURN KEEP LEFT	24 X 30			5.00		SE				
					LEFT TURN KEEP LEFT	24 X 30			5.00		NW				
					LEFT TURN KEEP LEFT	24 X 30			5.00		NE				
18	"SEL" 500+63	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		W				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (1 EA)
19	"CR" 28+79		X	R3-1	RIGHT TURN PROHIBITED	36 X 36	X		9.00		N	PST	2.5	1	SALVAGE SIGN (1 EA)
20	"EXL" 810+40	X		R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		E				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (1 EA)
21	"SEL" 500+77		X	R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		N				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		W				
22	"EXL" 810+21		X	R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		E				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		N				
23	"CR" 29+49		X	R4-7	KEEP RIGHT	24 X 30			5.00		N	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
24	"CR" 30+35	X		D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		NW				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
25	"CR" 31+35		X	W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		9.00		N	PST	2.5	1	SALVAGE SIGN AT EXISTING LOCATION, APPROX STA: 32+22 (1 EA)
26	"CR" 31+37		X	W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		9.00		N	PST	2.5	1	SALVAGE SIGN AT EXISTING LOCATION, APPROX STA: 32+19 (1 EA)
27	"CR" 32+76		X	SPECIAL 13	JOHANSEN EXPY	92 X 24		X	15.33		S	TS	2.5	2	SALVAGE SIGN (1 EA)
28	"CR" 33+56		X	W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		7.07		N	PST	2.5	1	
29	"CR" 33+66	X		W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		N	PST	2.5	1	SALVAGE SIGN AT EXISTING LOCATION, APPROX STA: 34+39 (1 EA)
30	"CR" 34+17		X	R4-7	KEEP RIGHT	24 X 30			5.00		W	PST	2.5	1	SALVAGE ALL SIGNS, INCLUDING ADJACENT OM1-1 SIGN, APPROX STA: 34+15 (3 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
31	"CR" 34+45		X	R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	SALVAGE R1-1 SIGN (1 EA)
				R6-1	ONE WAY	36 X 12	X		3.00						
32	"CR" 34+45		X	R3-4	U-TURN PROHIBITED	36 X 36	X		9.00		N	TS	3.0	1	SALVAGE R8-8 AND R6-1 SIGNS (2 EA)
				R8-8	DO NOT STOP ON TRACKS	24 X 30			5.00						
				R6-1	ONE WAY	36 X 12	X		3.00		W				
33	"CR" 34+51		X	W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		N	PST	2.5	1	SALVAGE EXISTING SIGN, APPROX. STA: 34+65 (1 EA)

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
34	"CR" 35+49	X		R3-4	U-TURN PROHIBITED	36 X 36	X		9.00		S	TS	3.0	1	SALVAGE EXISTING SIGNS "NO TURNS" AND OM1-1, APPROX. STA: 35+39 (2 EA)
				R8-8	DO NOT STOP ON TRACKS	24 X 30			5.00						
35	"CR" 35+68		X	W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		S	PST	2.5	1	
36	"CR" 36+39	X		W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		7.07		S				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
37	"CR" 36+41	X		W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		7.07		S	PST	2.5	1	
38	"CR" 36+38		X	D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		N				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
39	"CR" 36+92	X		D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		S				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
40	"CR" 37+09	X		R1-2	YIELD	36 X 36	X		9.00		E	PST	2.5	1	SALVAGE SIGN (1 EA)
41	"CR" 37+36		X	R4-7	KEEP RIGHT	24 X 30			5.00		SE	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
42	"CR" 37+62	X		W12-1	DOUBLE ARROW	36 X 36	X		9.00		E	TS	3	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
43	"CR" 38+11	X		R4-7	KEEP RIGHT	24 X 30			5.00		SW	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
44	"CR" 38+73	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		NW				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		SW				
45	"CR" 39+34	X		D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		N	PST	2.5	1	SALVAGE SIGN (1 EA)
47	"CR" 37+12		X	W11-2	PEDESTRIAN	36 X 36	X		9.00		N	PST	2.5	1	SALVAGE SIGN (2 EA)
				W16-7P	DOWNWARD DIAGONAL ARROW	24 X 12			2.00						
48	"CR" 37+98		X	R4-7	KEEP RIGHT	24 X 30			5.00		E	PST	2.5	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
49	"CR" 44+29	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		SE				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
W_X_ = WIDE FLANGE

SIGNING SUMMARY

STATE OF ALASKA
PRELIMINARY PS&E
CE-XXB83
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H_Sign Summary-H19 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H20	H24

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
50	"CR" 46+19	X		D11-2 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		E				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
51	"CR" 46+88	X		R1-1	STOP	30 X 30	X		6.25		NE	PST	2.5	1	SALVAGE SIGN (2 EA)
				SPECIAL 14	COLLEGE RD	30 X 8	X		1.67						
52	"CR" 55+47	X		R1-1	STOP	30 X 30	X		6.25		NE	PST	2.5	1	SALVAGE SIGN (2 EA)
				R6-1	ONE WAY	36 X 12	X		3.00						
53	"CR" 58+81	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		SW				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		SE				
54	"CR" 59+73	X		R10-3ER	PUSH BUTTON COUNTDOWN	9 X 15			0.94		NW				MOUNT ABOVE PEDESTRIAN BUTTON. SALVAGE SIGN (2 EA)
				R10-3EL	PUSH BUTTON COUNTDOWN	9 X 15			0.94		SW				
55	"CR" 61+79	X		D11-1 MOD	BIKE ROUTE GUIDE	24 X 24			4.00		E				MOUNT ON ELECTROLIER. SALVAGE EXISTING SIGN (1 EA)
56	"CR" 62+54	X		R1-1	STOP	30 X 30	X		6.25		NE	PST	2.5	1	SALVAGE SIGN (2 EA)
				R6-1	ONE WAY	36 X 12	X		3.00						
57	"CR" 64+73		X	R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		NW	PST	2.5	1	SALVAGE SIGN (1 EA)
59	"EXL" 809+17		X	W12-1	DOUBLE ARROW	36 X 36	X		9.00		SW	TS	3.0	1	SALVAGE SIGN (2 EA)
				OM1-1	OBJECT MARKER	18 X 18			2.25						
60	"SEL" 501+75		X	R1-2	YIELD	36 X 36	X		9.00		SW				MOUNT ON ELECTROLIER. SALVAGE SIGN (1 EA)
1A	"CR" 13+99	X		W14-1	DEAD END	36 X 36	X		9.00		S	PST	2.5	1	SALVAGE EXISTING SIGN NEXT TO FIRE HYDRANT APPROX STA: 14+05 (1 EA)
5A	"CR" 20+08	X		W14-1	DEAD END	36 X 36	X		9.00		S	PST	2.5	1	SALVAGE EXISTING SIGN LOCATED APPROX 20FT SOUTH OF MAILBOX AT STA: 20+95 (1 EA)
6A	"CR" 23+32	X		W14-2	NO OUTLET	36 X 36	X		9.00		SW	PST	2.5	1	SALVAGE EXISTING SIGN LOCATED APPROX 100FT NE OF PROPOSED 6A POST, STA 23+70 (1 EA)

PROJECT QUANTITY SUMMARY

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL	PAY ITEM QUANTITY
615.0001.0000	STANDARD SIGN	SF	472.10	473
615.0006.0000	SALVAGE SIGN	EACH	100	100

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
W_X_ = WIDE FLANGE

Preliminary Plans

SIGNING SUMMARY

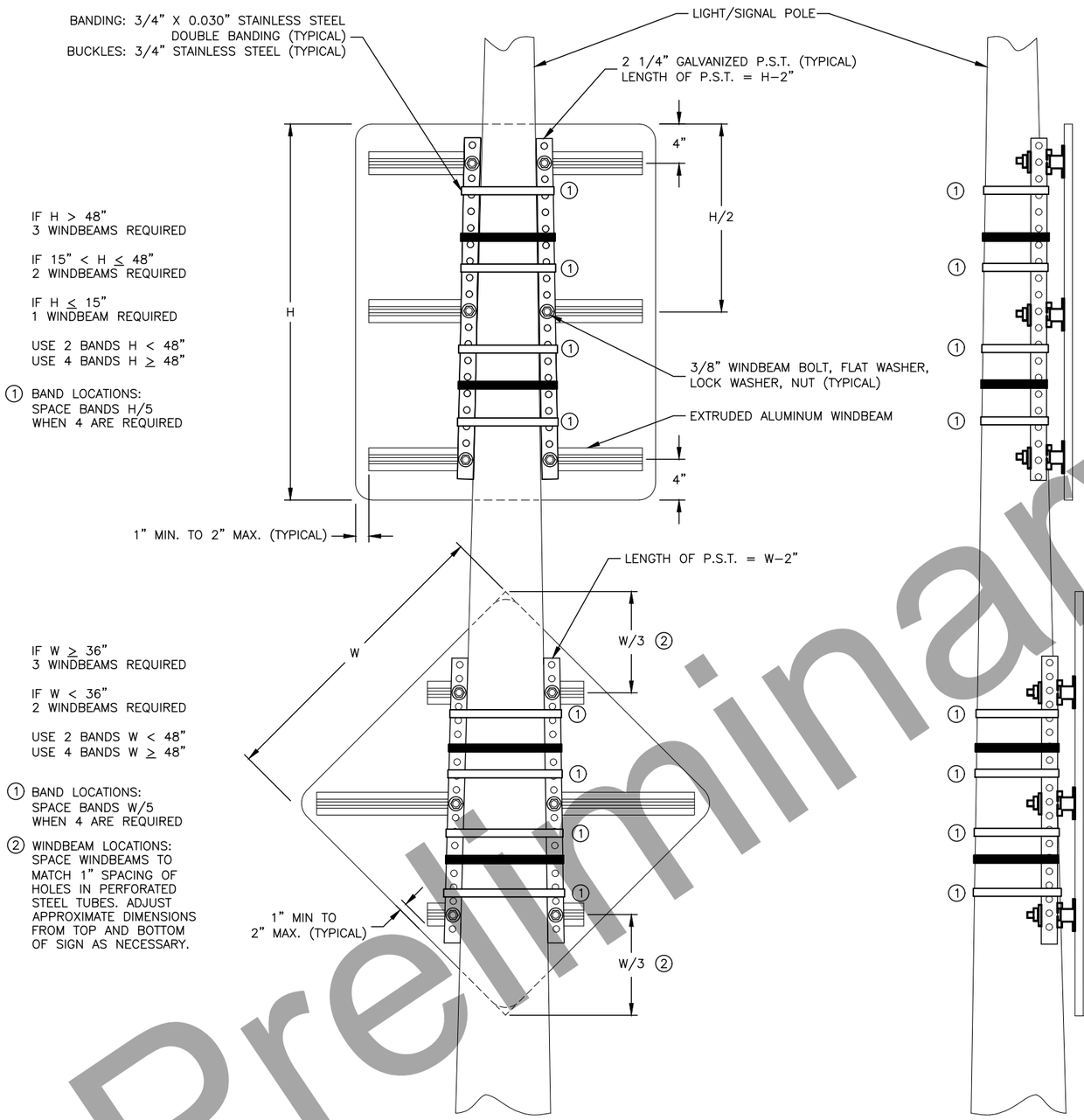
STATE OF ALASKA
PRELIMINARY
PS&E
CE-XXBB2
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H_Sign Summary-H20 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H21	H24

LIGHT/SIGNAL POLE SIGN FRAMING & MOUNTING DETAILS



IF H > 48"
3 WINDBEAMS REQUIRED

IF 15" < H ≤ 48"
2 WINDBEAMS REQUIRED

IF H ≤ 15"
1 WINDBEAM REQUIRED

USE 2 BANDS H < 48"
USE 4 BANDS H ≥ 48"

① BAND LOCATIONS:
SPACE BANDS H/5
WHEN 4 ARE REQUIRED

IF W ≥ 36"
3 WINDBEAMS REQUIRED

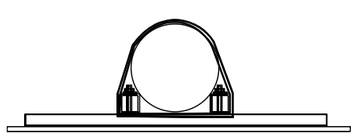
IF W < 36"
2 WINDBEAMS REQUIRED

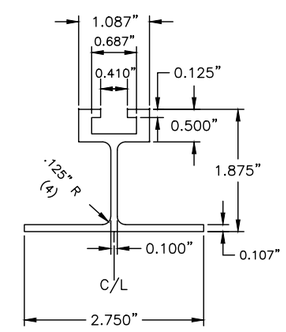
USE 2 BANDS W < 48"
USE 4 BANDS W ≥ 48"

① BAND LOCATIONS:
SPACE BANDS W/5
WHEN 4 ARE REQUIRED

② WINDBEAM LOCATIONS:
SPACE WINDBEAMS TO MATCH 1" SPACING OF HOLES IN PERFORATED STEEL TUBES. ADJUST APPROXIMATE DIMENSIONS FROM TOP AND BOTTOM OF SIGN AS NECESSARY.

NOTE:
ATTACH SIGN TO WINDBEAMS WITH 3/16" RIVETS AT 4" STAGGERED SPACING.





EXTRUDED ALUMINUM WINDBEAM

NOTES:

1. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGNS TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

Preliminary Plans

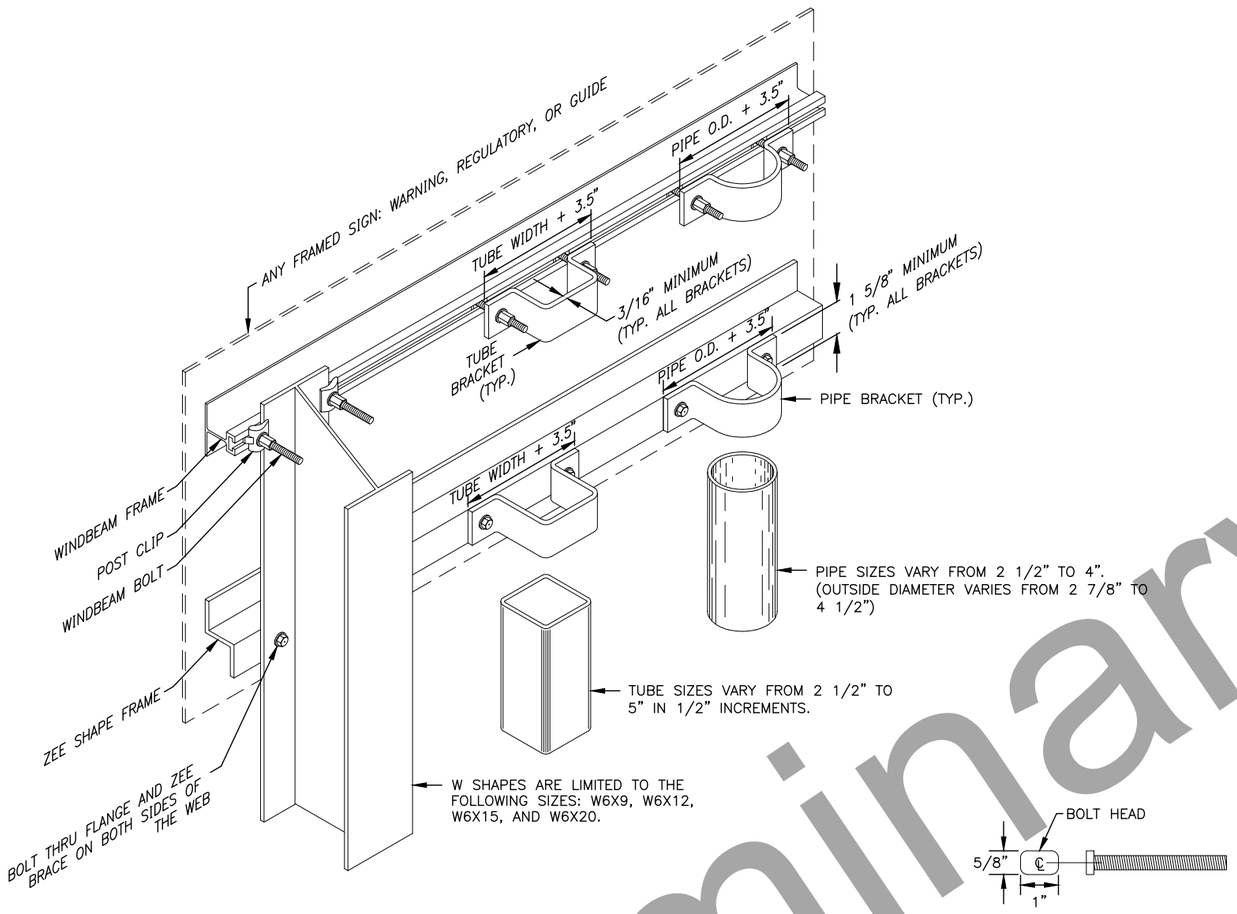
LIGHT POLE SIGN FRAMING & MOUNTING DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H21 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H22	H24

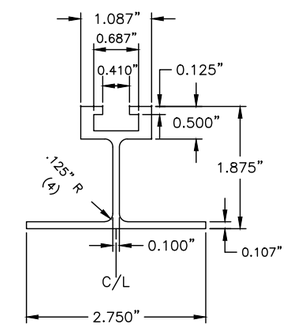


FRAMED SIGN ATTACHMENT BRACKETS

3/8" WINDBEAM BOLT

NOTES:

1. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES OR A BRACKET WITH SQUARE CORNERS ON TUBES.
2. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
4. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR ZEE SHAPE FRAMING AND RIVETS.



EXTRUDED ALUMINUM WINDBEAM

NOTES:

1. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGNS TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

Preliminary Plans

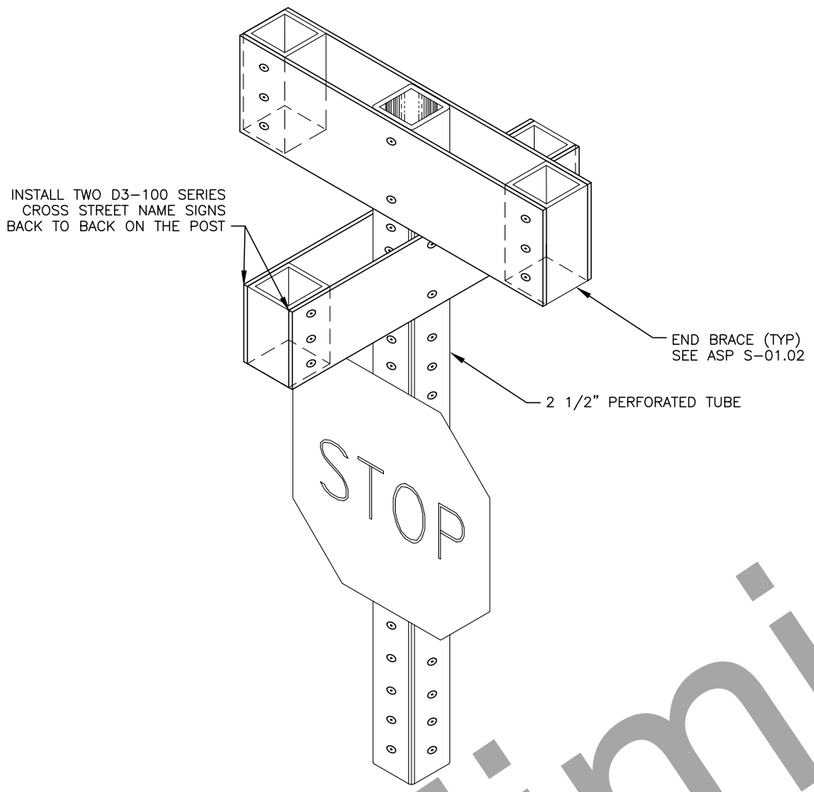
FRAMED SIGN ATTACHMENT DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

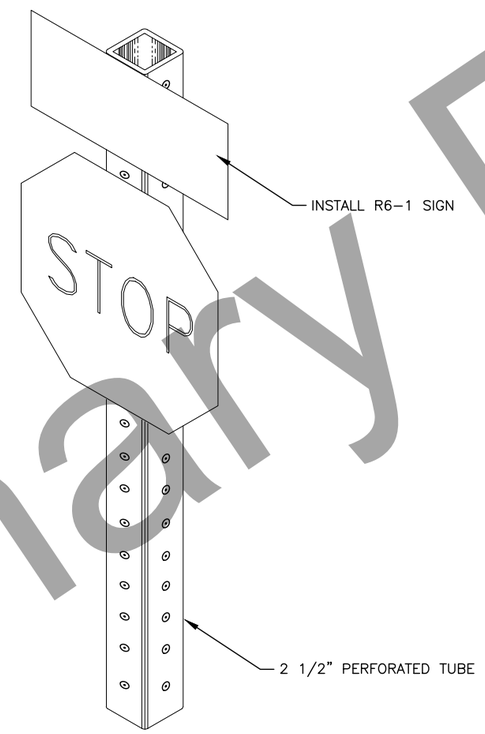
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H22 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

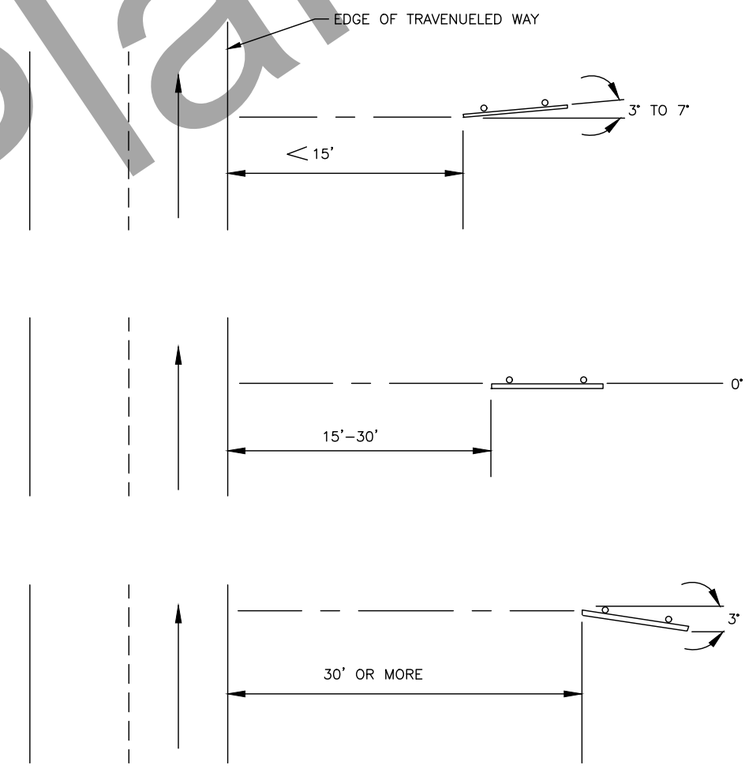
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H23	H24



STREET NAME SIGN MOUNTING DETAIL



ONE WAY SIGN MOUNTING DETAIL



SIGN INSTALLATION ANGLES

STREET NAME SIGN NOTE:

VERTICALLY SEPARATE R1-1 (STOP) SIGN AND ALL OTHER SIGN ASSEMBLIES MOUNTED ON THE SAME POST BY 2 1/2 INCHES.

Preliminary Plans

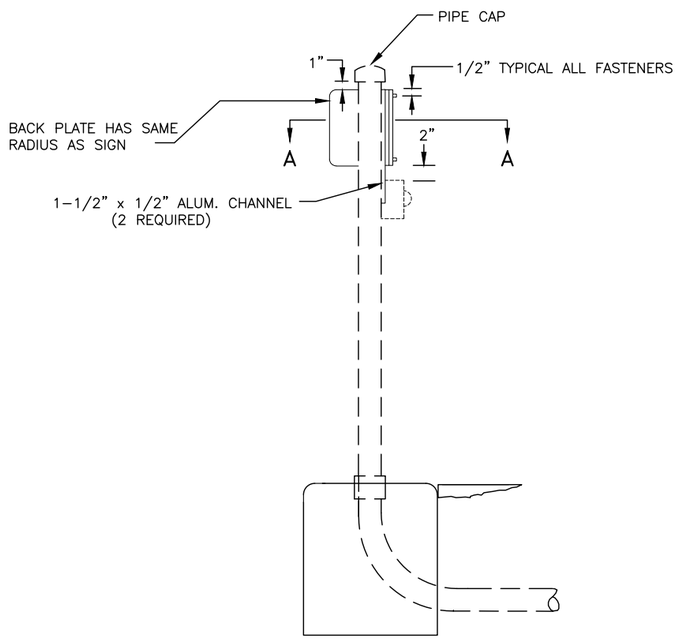
SIGN INSTALLATION DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H23 Thu, Jun/09/22 05:18am

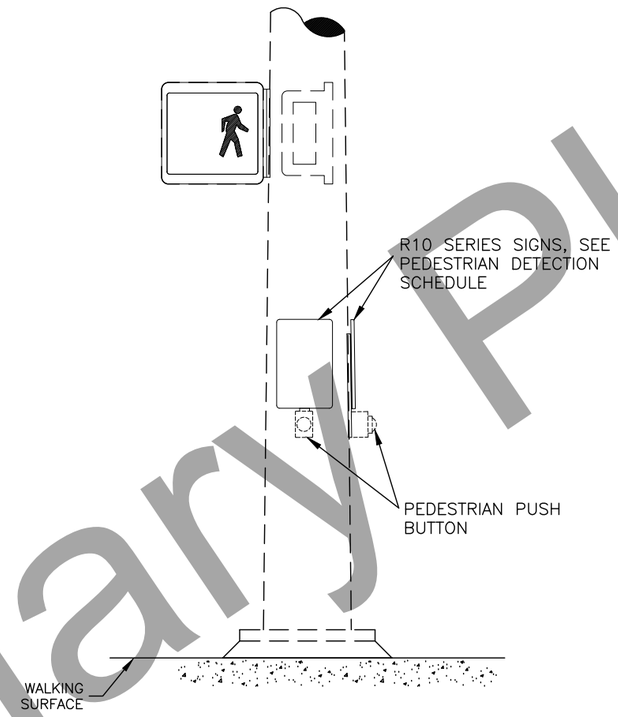
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	H24	H24

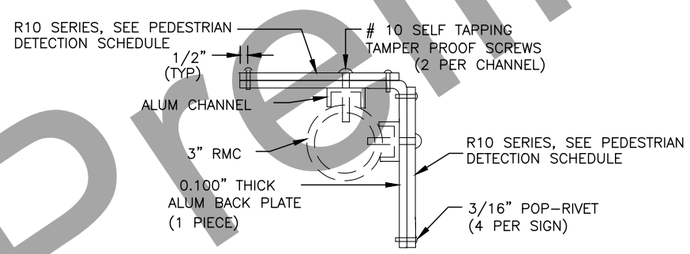


BACK PLATE SHALL BE THE SAME SIZE AS THE SIGN AND SHALL BE CENTERED ON THE EXISTING POST AND ALUM. CHANNEL.

PEDESTRIAN PUSH BUTTON POST & SIGN DETAILS



SIGNAL POLE MOUNTED PEDESTRIAN
HARDWARE & SIGNAGE



SECTION A-A

Preliminary Plans

PEDESTRIAN PUSH BUTTON SIGN DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_H-H24 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K1	K10

GENERAL NOTES:

1. REMOVE EXISTING TRAFFIC CABINET (CBA 2) INCLUDING SUPPORT POLE AND FOUNDATION, PIEZOELECTRIC SENSORS, PRESENCE LOOPS, TEMPERATURE SENSORS, JUNCTION BOXES, CONDUITS, AND WIRING.
2. THE EXISTING TRAFFIC CABINET (CBA 2) INCLUDING DATA EQUIPMENT CABLES AND AMBIENT AIR TEMPERATURE SENSOR SHALL BE SALVAGED AND DELIVERED TO DOT&PF MAINTENANCE YARD 2301 PEGER ROAD, FAIRBANKS, AK 99709. COORDINATE EQUIPMENT DROP OFF WITH THE SIGNALS SHOP, CALL (907) 451–5279.
3. FURNISH AND INSTALL NEW CABINET AND HARDWARE INCLUDING ALL OTHER NECESSARY ELECTRICAL COMPONENTS, REFER TO SECTION 669 OF THE PROJECT SPECIFICATION, TRAFFIC CABINET EQUIPMENT SCHEDULE, AND DETAILS ON SHEET K7 THROUGH K10.
4. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND COORDINATE FINAL SITE INSTALLATION WITH THE ENGINEER. THE ENGINEER SHALL APPROVE ALL MODIFICATIONS TO THE INSTALLATION.
5. UNLESS NOTED OTHERWISE, REMOVE AND DISPOSE OF ALL EXISTING CURB AND GUTTER WITHIN THE CONDUIT CROSSING AREAS BACK TO THE NEAREST CONSTRUCTION JOINT. RECONSTRUCT CURB AND GUTTER IN ACCORDANCE WITH DETAILS ON THE E–SHEETS. REFER TO SHEET K4 FOR CURB AND GUTTER PIEZOELECTRIC SENSOR INSTALLATION DETAILS OPTION I AND II
6. COORDINATE AND PROVIDE CELLULAR SERVICE TO THE SITE AS REQUIRED.
7. INSTALLATION OF EQUIPMENT AND MATERIALS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE CURRENT NATIONAL ELECTRIC CODE, ALASKA DOT&PF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, THE PROJECT SPECIAL PROVISIONS, AND THE PLANS.
8. PROVIDE AS–BUILT PLANS, REFER TO SUBSECTION 669–1.04 OF THE PROJECT SPECIFICATION.

LAYOUT NOTES:

1. INSTALL 1/2 INCH PREFORMED BITUMINOUS JOINT MATERIAL BETWEEN JUNCTION BOX AND PAVEMENT WHEN JUNCTION BOXES ARE LOCATED IMMEDIATELY ADJACENT TO A SIDEWALK OR ROAD SURFACE.
2. INSTALL PLASTIC SLEEVED GROUNDING BUSHINGS ON ALL CONDUITS BEFORE PULLING ANY WIRE. GROUND WITH A MINIMUM #6 BARE COPPER.
3. INSTALL AND TEST ALL LOOP DETECTORS PRIOR TO OVERLAYING PAVEMENT.
4. THE MINIMUM CLEARANCE BETWEEN A DETECTION LOOP AND THE TAIL OF ANOTHER DETECTION LOOP OR PIEZOELECTRIC SENSOR SHALL NOT BE LESS THAN 12 INCHES. LOOP TAILS SHALL NOT CROSS EACH OTHER, BUT HAVE NO MINIMUM CLEARANCE.
5. JUNCTION BOX STATION AND OFFSETS ARE TO CENTER OF STRUCTURE.

AUTOMATIC VEHICLE CLASSIFICATION COUNTER ASSEMBLIES SCHEDULE

SITE NUMBER	STATION NUMBER	CABINET STATION	CABINET OFFSET	CONTROL CABINET	LOAD CENTER	NUMBER OF TYPE II JUNCTION BOXES	NUMBER OF LANES	NUMBER OF INDUCTIVE LOOPS	NUMBER OF PIEZOELECTRIC SENSORS	AMBIENT AIR AND PAVEMENT TEMPERATURE SENSORS
1	13420507	49+43.37	49.0' RT	NEW	EXISTING, NEW UNDERGROUND FEEDER CIRCUIT TO CONTROL CABINET	3	4	8	8	YES

TRAFFIC CABINET EQUIPMENT SCHEDULE

INSTALL AMBIENT AIR AND PAVEMENT TEMPERATURE SENSORS	FURNISH DATA LOGGER	INSTALL TELEPHONE SERVICE	INSTALL CELLULAR MODEM WITH EXTERNAL ANTENNA, INCLUDE TWO (2) 6–9–INCH DIPOLE ANTENNA AS SPARES	INSTALL REMOTELY CONTROLLABLE SERIAL SWITCH	INSTALL LOAD CENTER WITH TRANSIENT VOLTAGE SURGE PROTECTION	INSTALL RECEPTACLES AND PLUG STRIP RECEPTACLES	INSTALL INTERIOR LED LIGHT	INSTALL COOLING FAN	INSTALL HEATER	INSTALL THERMOSTAT	INSTALL INTERIOR POWER CIRCUITS	INSTALL TERMINAL BLOCK	INSTALL AVC COUNTER
YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

LABELS:

1. ALL CABLES SHALL BE LABELED AT BOTH ENDS AND AT EVERY JUNCTION BOX THROUGH WHICH THE CABLES PASS, PER SPECIFICATION SECTION 660–3.05.13.
2. ALL WIRE PAIRS SHALL BE LABELED AT THE TERMINAL BLOCK AND AT ANY LOOSE ENDS.
3. THE FOLLOWING CONVENTIONS SHALL APPLY TO DESIGNATING AND LABELING CABLES AND WIRE PAIRS:

   LANES: TRAFFIC LANES AND THEIR RESPECTIVE LOOPS AND SENSORS SHALL BE LABELED FROM OUTSIDE EDGE OF THE ROAD TOWARD THE CENTER AS FOLLOWS:

   | A | B | | B | A |

   FOUR LANE EXAMPLE

   TERMINAL BLOCKS: WIRES FROM SENSORS PLACED IN LANES WHICH ARE CLOSEST TO THE CONTROL BOX SHALL BE PLACED AT THE LEFT OR AT THE TOP OF THE TERMINAL BLOCK, DEPENDING ON ORIENTATION OF THE ROAD.
4. WIRES FOR INDUCTIVE LOOPS AND SENSORS ARE LABELED AS FOLLOWS:

   PnDLc

   WHERE:

   P IS THE PREFIX:
   - V TRAFFIC VOLUME LOOP
   - H VEHICLE CLASSIFICATION/SPEED LOOP
   - GL AUTOMATIC VEHICLE CLASSIFICATION (AVC) SENSOR
   - Ga AUTOMATIC VEHICLE CLASSIFICATION PIEZO

   n NUMBER SUFFIX FOR MULTIPLE LOOPS IN THE SAME LANE

   D DIRECTION (N, S, E, W, NE, SE, SW, NW)

   L IS THE PREFIX FOR ROAD DESIGNATION
   - L LANE*
   - R RAMP**
   - SR SPUR RAMP**
   - LP LOOP**
   - LP LOOP RAMP**
   - * ROADS AND HIGHWAYS
   - ** INTERCHANGES

   c IS THE SUFFIX FOR LANE DESIGNATION (A, B)

SYMBOL LEGEND AND ABBREVIATIONS:

RMC: RIGID METAL CONDUIT, GALVANIZED

(TG) GROUND TEMPERATURE PROBE

(TA) AMBIENT AIR TEMPERATURE SENSOR

(TP) IN–PAVEMENT TEMPERATURE SENSOR

(#) CONDUIT REFERENCE NUMBER

[#] NOTE REFERENCE NUMBER

PIEZOELECTRIC SENSOR

H2SLA INDUCTIVE LOOP SENSOR

AUTOMATIC VEHICLE CLASSIFICATION COUNTER

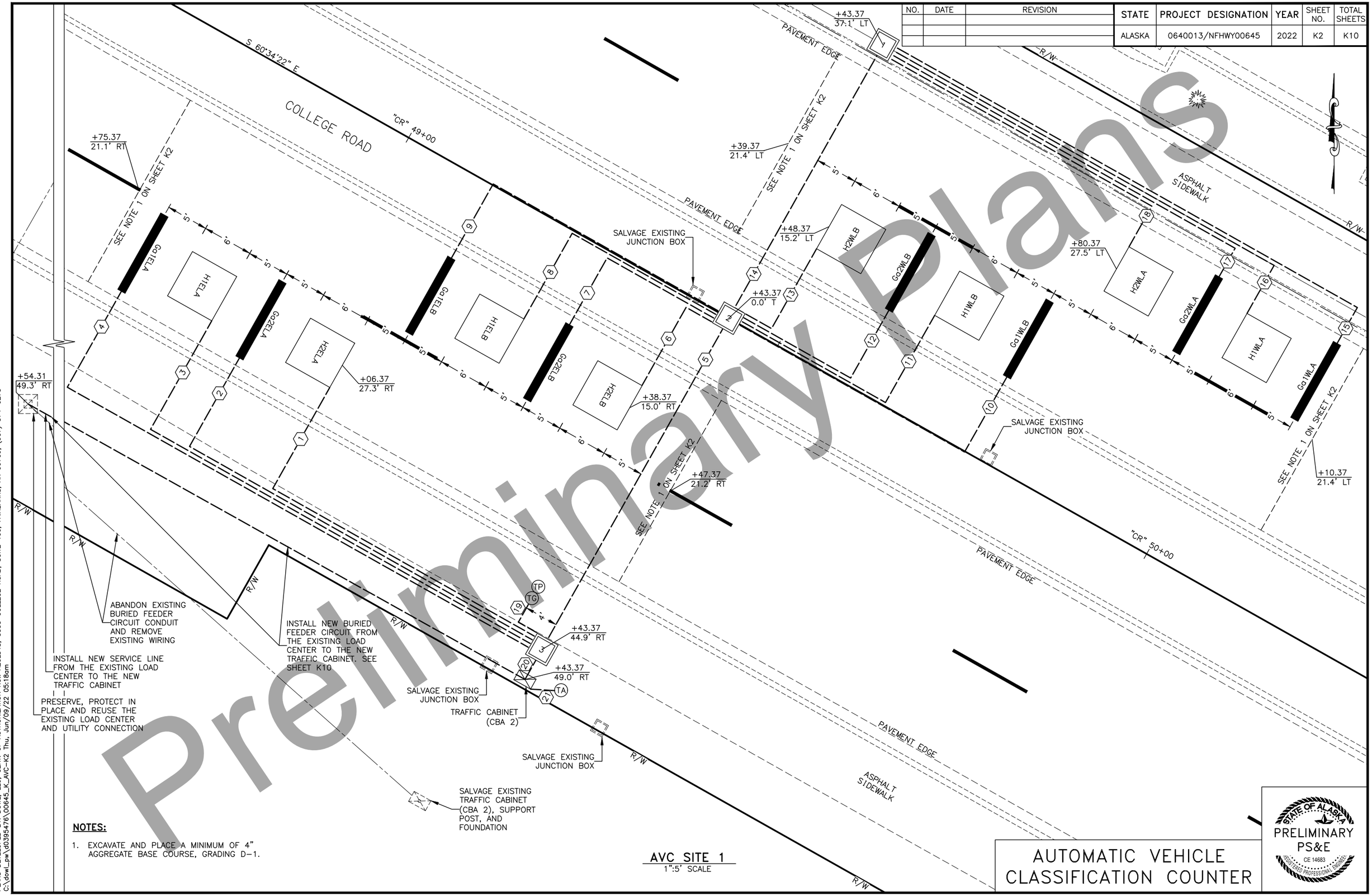
STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
C:\dowl_pw\d0395476\00645_K_AVC–K1 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K2	K10



NOTES:

1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D-1.

AVC SITE 1
1":5' SCALE

AUTOMATIC VEHICLE CLASSIFICATION COUNTER

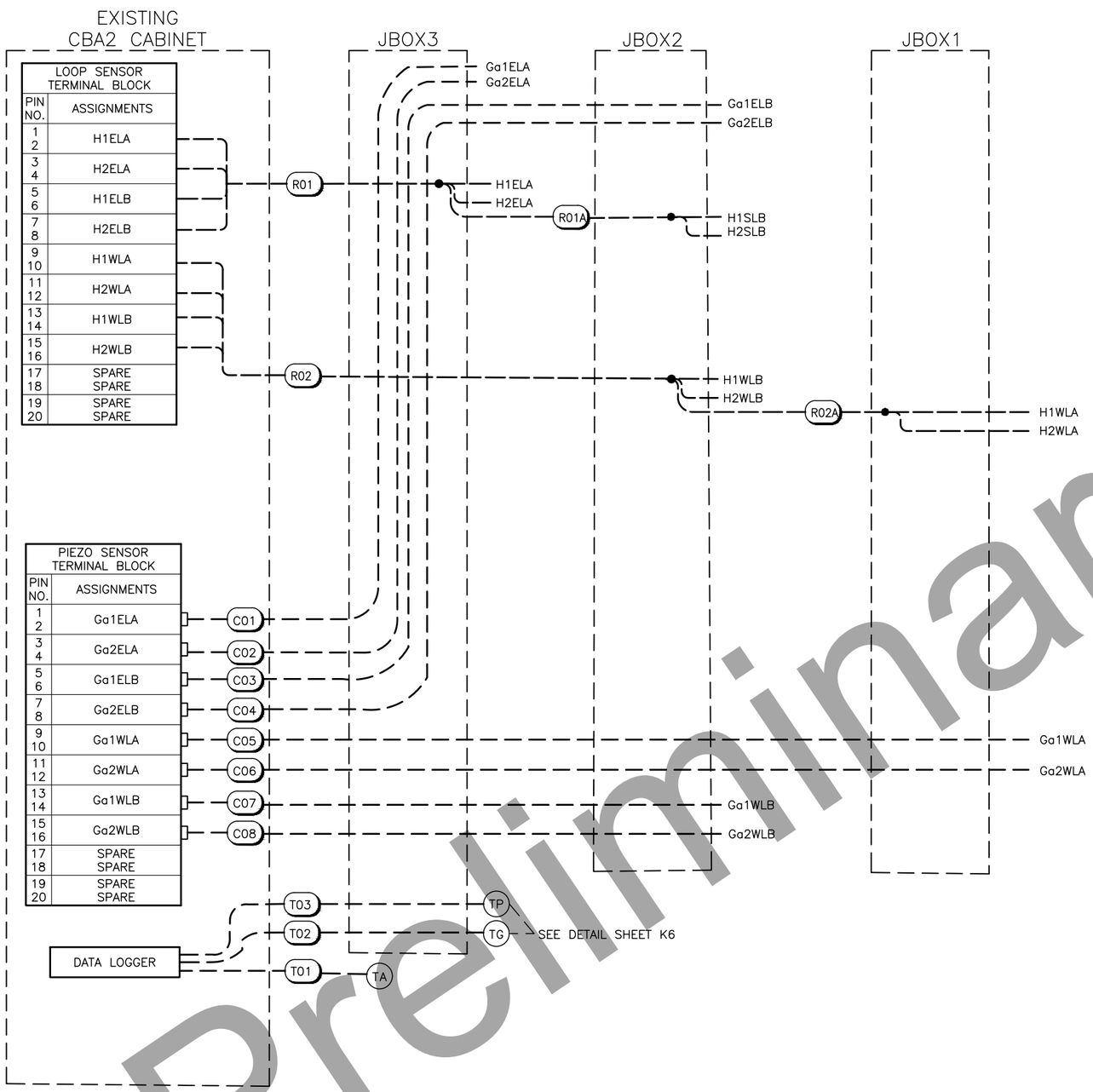
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_K_AVC-K2 Thu, Jun/09/22 05:18am

NO.	DATE	REVISION

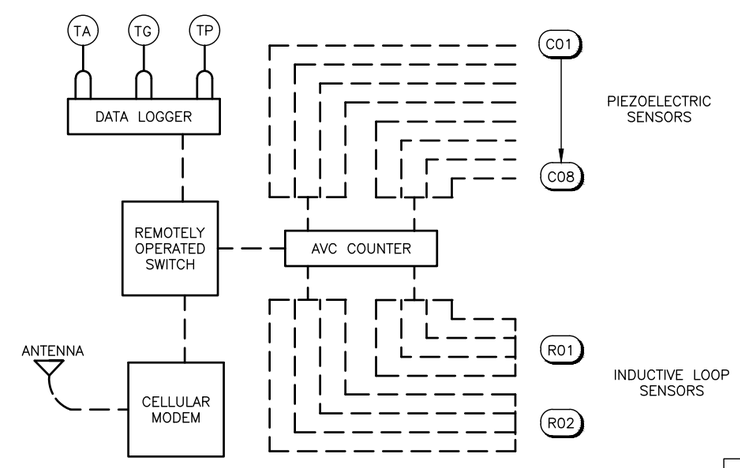
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K3	K10



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
#	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	1	JBOX3	H2ELA	1	1 PR#14	
2	1	1	JBOX3	Ga2ELA	1	RG58 COAX	CO2
3	1	1	JBOX3	H1ELA	1	1 PR#14	
4	1	1	JBOX3	Ga1ELA	1	RG58 COAX	CO1
5	1	1	JBOX3	JBOX2	6	RG58 COAX	CO3–CO8
					2	6 PR#18	RO1A, RO2
	1	2			SPARE	SPARE	
6	1	1	JBOX2	H2ELB	1	1 PR#14	
7	1	1	JBOX2	Ga2ELB	1	RG58 COAX	CO4
8	1	1	JBOX2	H1ELB	1	1 PR#14	
9	1	1	JBOX2	Ga1ELB	1	RG58 COAX	CO3
10	1	1	JBOX2	Ga1WLB	1	RG58 COAX	CO7
11	1	1	JBOX2	H1WLB	1	1 PR#14	
12	1	1	JBOX2	Ga2WLB	1	RG58 COAX	CO8
13	1	1	JBOX2	H2WLB	1	1 PR#14	
14	1	1	JBOX2	JBOX1	2	RG58 COAX	CO5–CO6
					1	6 PR#18	RO2A
	1	2			SPARE	SPARE	
15	1	1	JBOX1	Ga1WLA	1	RG58 COAX	CO5
16	1	1	JBOX1	H1WLA	1	1 PR#14	
17	1	1	JBOX1	Ga2WLA	1	RG58 COAX	CO6
18	1	1	JBOX1	H2WLA	1	1 PR#14	
19	1	1	JBOX3	TG,TP	1	2 C#14	TO2
					1	2 C#14	TO3
20	1	2	CBA2	JBOX3	8	RG58 COAX	CO1–CO8
					2	6 PR#18	RO1–RO2
	1	2			SPARE	SPARE	
21	1	1	CBA2	TA	1	2 C#14	TO1



DATA/COMMUNICATION CIRCUITS
NTS

WIRING DIAGRAM

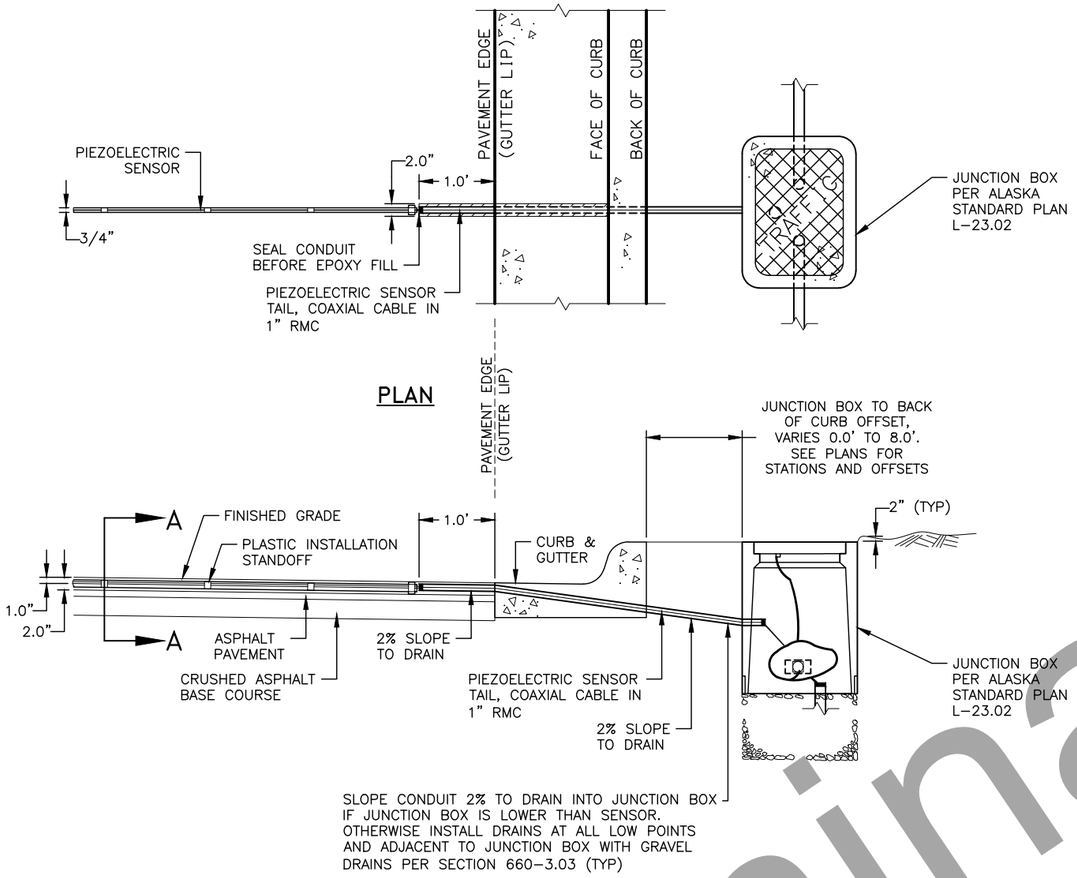
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_K_AVC-K3 Thu, Jun/09/22 05:18am

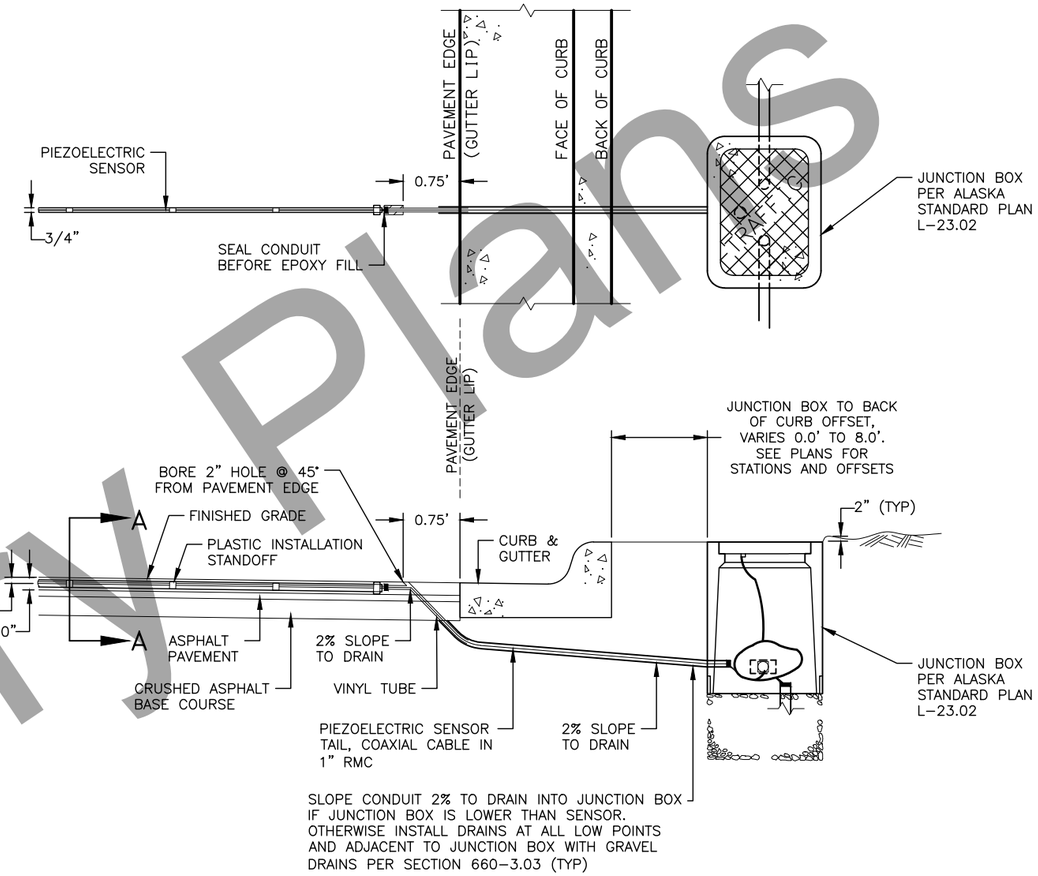
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K4	K10



PROFILE

PIEZOELECTRIC SENSOR INSTALLATION DETAILS
OPTION I – DRILLING THROUGH CURB & GUTTER
NTS

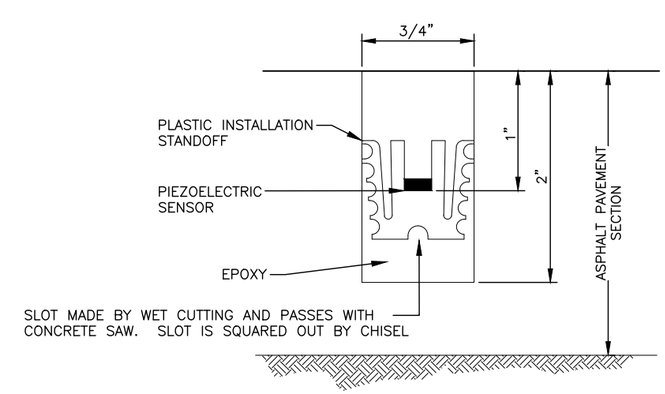


PROFILE

PIEZOELECTRIC SENSOR INSTALLATION DETAILS
OPTION II – BORING UNDER CURB & GUTTER
NTS

SENSOR LAYOUT NOTES:

1. PIEZOELECTRIC SENSORS: PLACE IN THE CENTER OF THE LANE WITH EACH END EXTENDED ONE FOOT FROM THE LANE LINE AND GUTTER LIP.
2. COAX CABLE FOR PIEZOELECTRIC SENSORS SHALL BE RUN WITHOUT SPLICES TO "F" CONNECTOR AT THE TERMINAL BLOCK IN THE CABINET. TAIL LENGTH SHALL PROVIDE A MINIMUM OF 6-FOOT OF SLACK IN THE CABINET PRIOR TO THE TERMINAL BLOCK.



SECTION A–A
NTS

PIEZOELECTRIC SENSOR DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

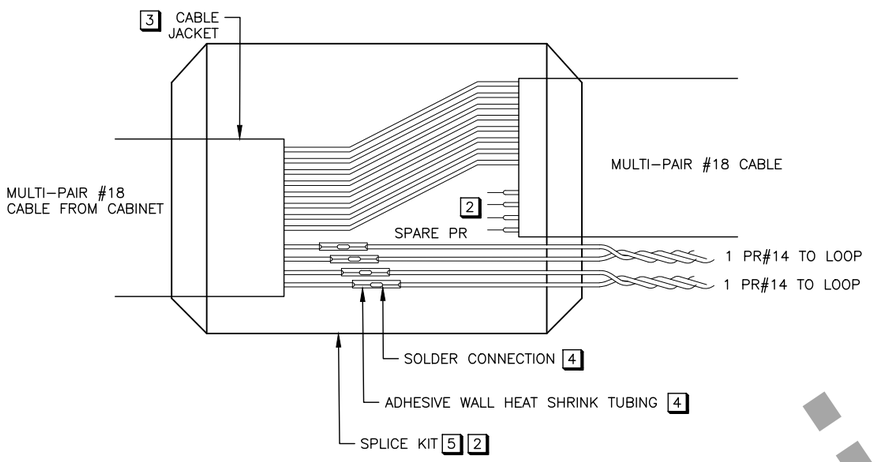
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K4 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

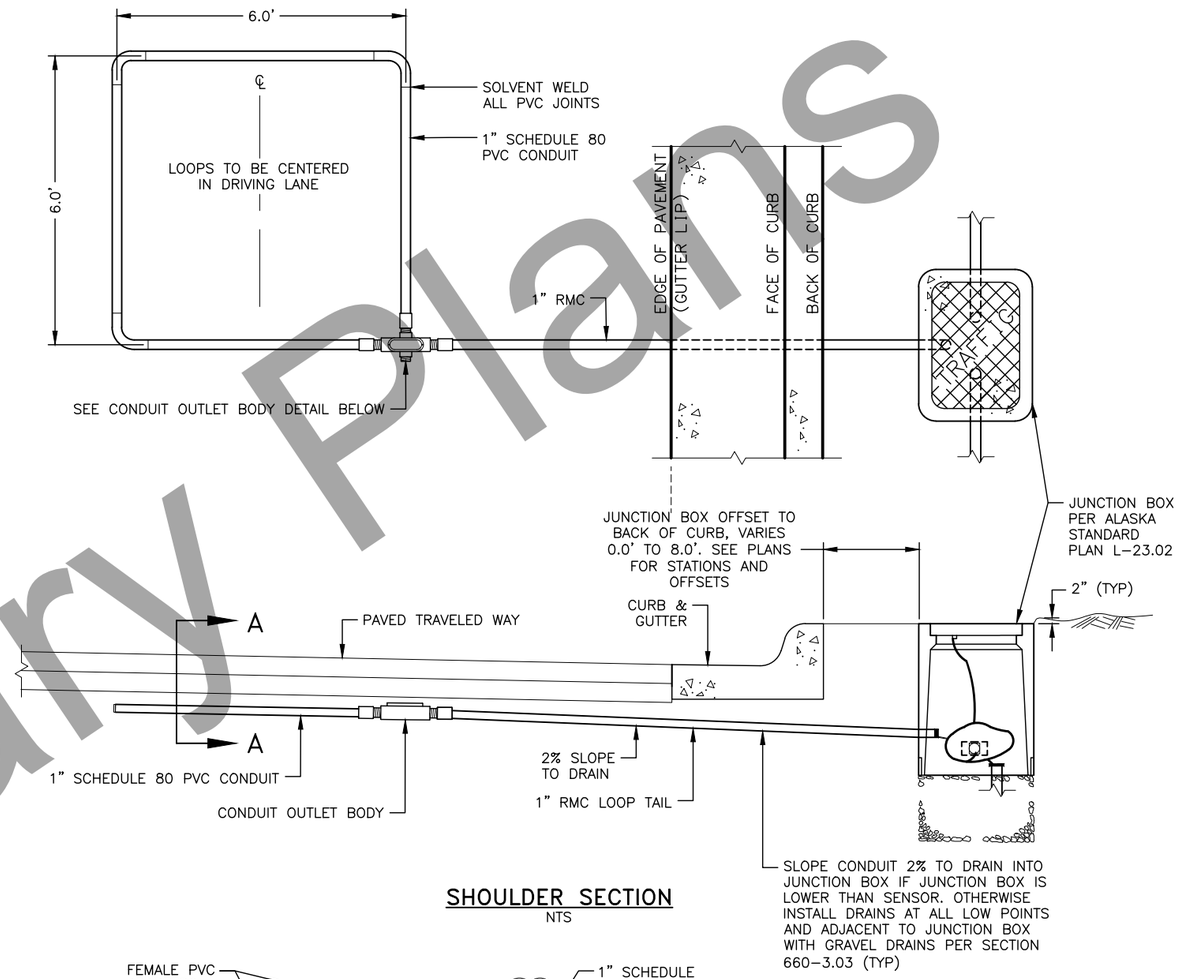
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K5	K10

SPLICE NOTES:

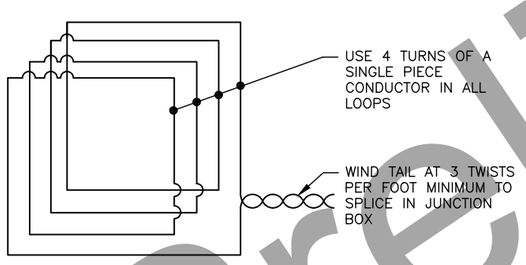
1. SCHEMATIC SKETCH SHOWS AN EXAMPLE OF TWO PAIRS USED WITH ONE SPARE.
2. [2] TERMINATE ALL SPARES WITHIN THE SPLICE BODY.
3. [3] SPLICE BODY TO ENCLOSE ALL CABLE JACKETS.
4. [4] STAGGER SPLICE POINTS. SOLDER CONNECTIONS, ENCLOSE EXPOSED CONDUCTORS IN ADHESIVE WALL HEAT SHRINK TUBING. DO NOT USE COMPRESSION CONNECTORS. WRAP CONDUCTOR OVER EACH OTHER BEFORE SOLDERING.
5. [5] USE A NON-REENTERABLE, WET LOCATION, COMMERCIAL SPLICE KIT 3M TYPE 82-A1 OR A2 OR EQUIVALENT AS APPROVED BY THE ENGINEER.
6. COVER ALL EXPOSED CONDUCTORS WITH HEAT SHRINK TUBING, INCLUDING SPARES.



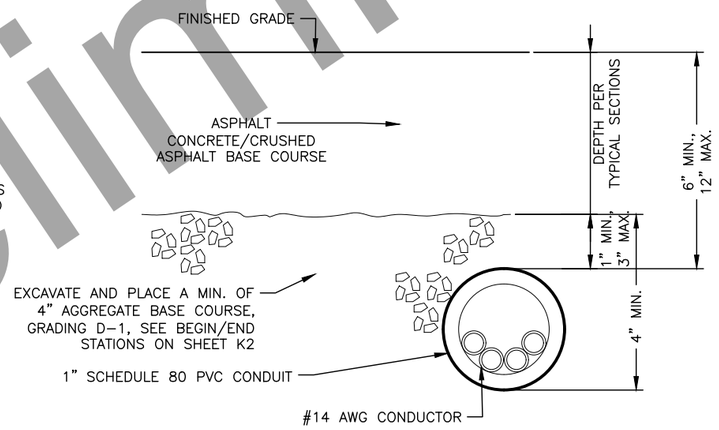
TYPICAL SPLICE DETAIL
NTS



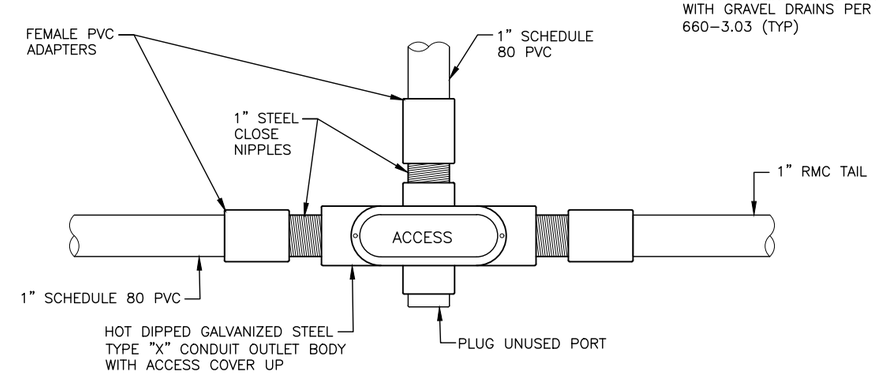
SHOULDER SECTION
NTS



LOOP WIRING DETAIL
NTS



SECTION A-A



CONDUIT OUTLET BODY DETAIL
NTS

INDUCTIVE LOOP NOTES:

1. ALL INDUCTIVE LOOPS SHALL BE WOUND IN THE SAME DIRECTION WITH THE STARTING LEAD MARKED "S" PER SECTION 660-3.05.13.
2. LEAD-IN WIRES FOR EACH LOOP SHALL BE IN SEPARATE CONDUITS TO THE FIRST JUNCTION BOX.
3. INDUCTIVE LOOPS SHALL BE INSTALLED IMMEDIATELY PRIOR TO PAVING THE SECTION OF ROADWAY. FINAL LIFT OF ASPHALT PAVEMENT SHALL BE SMOOTH OVER ALL INDUCTIVE LOOPS AND WITHOUT TRANSVERSE SEAMS, JOINTS, OR ROUGHNESS WITHIN 50 FEET OF THE LOOPS.

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
LICENSED PROFESSIONAL ENGINEER

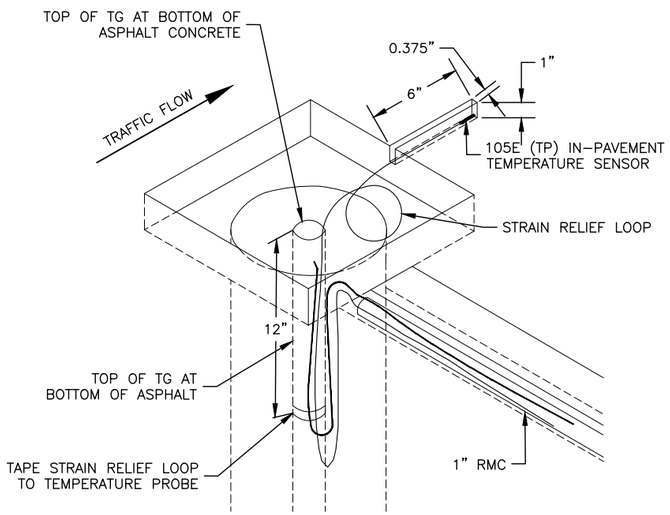
SPLICE AND PRESENCE LOOP DETAILS

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K5 Thu, Jun/09/22 05:19am

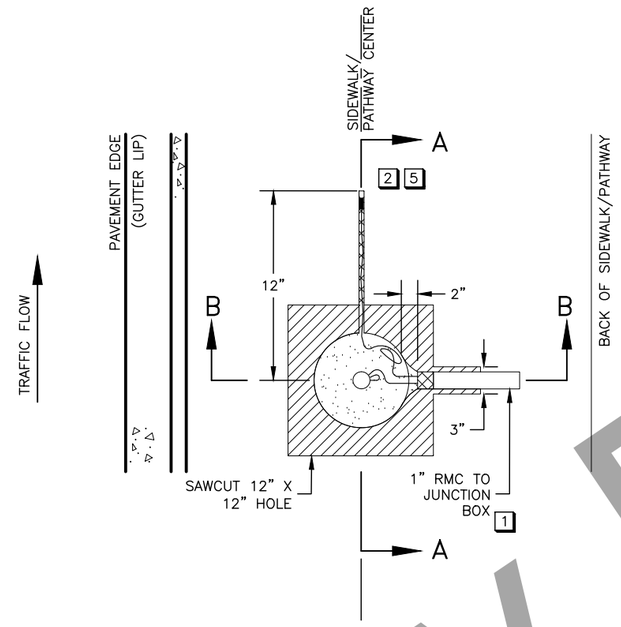
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K6	K10



ISOMETRIC VIEW

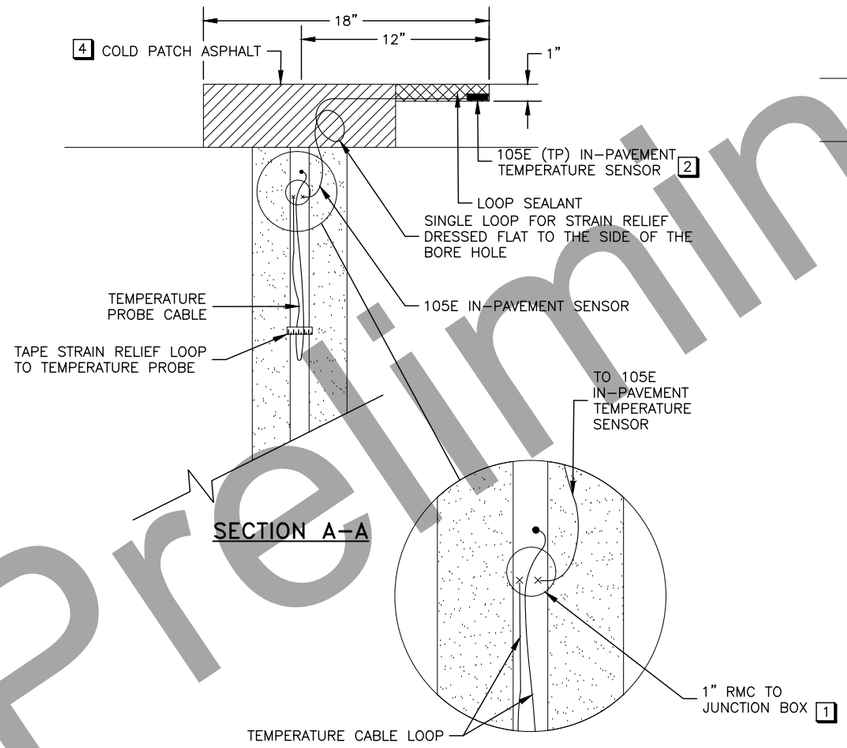
NTS



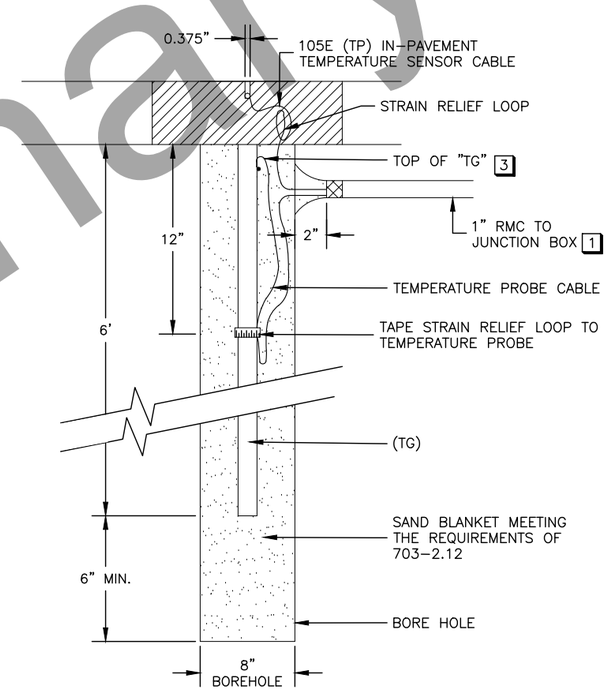
PLAN VIEW – GROUND TEMPERATURE PROBES

NOTES:

1. SEAL END OF CONDUIT WITH LOOP SEALANT AS APPROVED BY THE ENGINEER.
2. SLOT FOR IN-PAVEMENT SENSORS SHALL BE PARALLEL TO THE DIRECTION OF TRAVELED WAY.
3. INSTALL TOP OF GROUND TEMPERATURE PROBE (TG) IMMEDIATELY UNDERNEATH BOTTOM OF BOUND LAYER.
4. DO NOT HEAT COLD PATCH ASPHALT WITH FLAME DIRECTLY ABOVE TEMPERATURE SENSORS. HEAT COLD PATCH OFF TO THE SIDE OF BOREHOLE THEN GENTLY SHOVEL IT INTO PLACE. DIRECT FLAMES WILL DAMAGE THE SENSORS.
5. CENTER GROUND TEMPERATURE PROBE IN SIDEWALK/PATHWAY PAVEMENT. RUN TEMPERATURE PAVEMENT SENSOR CABLE UN-SPLICED TO THE CABINET FOR CONNECTION TO THE DATA LOGGER AND PROVIDE A MINIMUM OF 6-FOOT OF SLACK IN THE CABINET.
6. AMBIENT AIR TEMPERATURE SENSOR (TA) AND RADIATION SHIELD MOUNTING IS SHOWN ON SHEET K7.



SECTION A-A



SECTION B-B

GROUND TEMPERATURE SENSOR DETAILS

NTS

TEMPERATURE SENSOR DETAILS

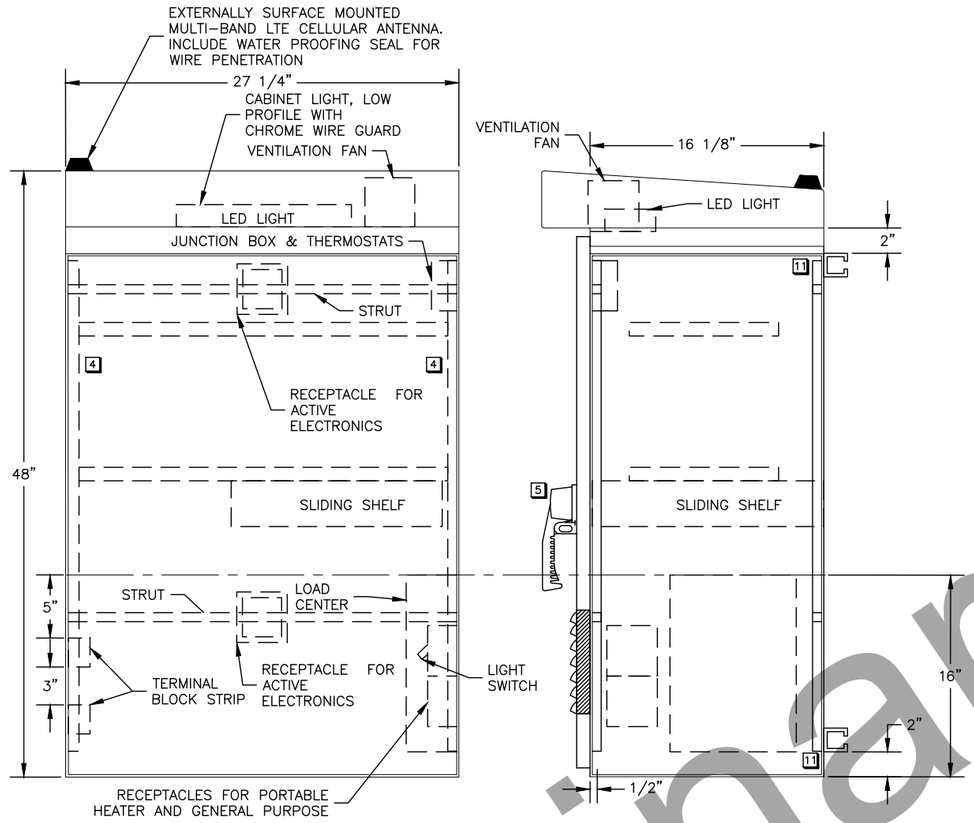
STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K6 Thu, Jun/09/22 05:19am

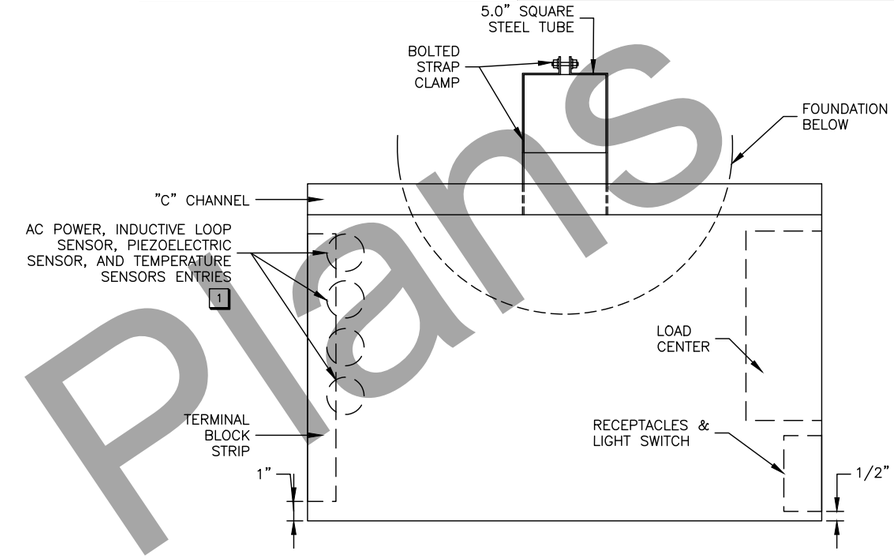
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K7	K10



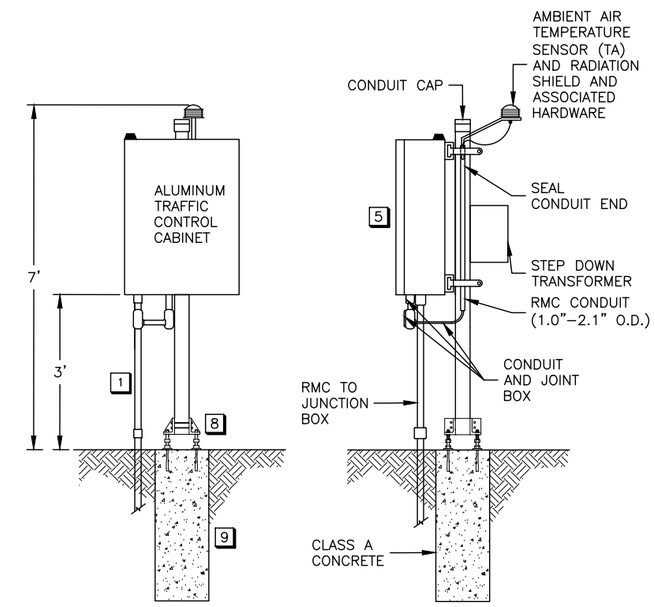
CABINET ENCLOSURE

NTS



TOP VIEW

NTS



FRONT ELEVATION

NTS

SIDE ELEVATION

NTS

NOTES:

1. NOT ALL CONDUITS SHOWN IN DETAIL, ADD OTHERS AS REQUIRED, SEE SHEET K10. USE CONDUIT HUBS IN BOTTOM OF CABINET. USE TYPE CHT WITH NEOPRENE SEAL AND INSULATED THROAT FOR NON-POWER CONDUITS WITH DETECTOR LEAD-IN CABLES. USE TYPE CHN FOR SERVICE ENTRANCE CONDUIT AND CONNECT FLEXIBLE METAL CONDUIT TO CIRCUIT BREAKER PANEL INSIDE CABINET.
2. REFER TO SUBSECTION 669-2.02 OF THE PROJECT SPECIFICATION FOR DESCRIPTION OF CABINET REQUIREMENTS AND ADDITIONAL ACCESSORIES WHICH MAY NOT BE SHOWN. CABINET SHALL BE CERTIFIED BY NATIONALLY RECOGNIZED INDEPENDENT THIRD PARTY TESTING AGENCY (UL, CSA, FM, ETC.)
3. ALL EQUIPMENT INSIDE CABINET FASTENED TO RAIL SHALL HAVE NO SCREW PENETRATIONS OF THE CABINET SURFACE.
4. SIDE RAILS SHALL BE INSTALLED TO PERMIT HORIZONTAL ADJUSTMENT OF VERTICAL RAILS.
5. CONTROLLER CABINET DOOR TO OPEN AWAY FROM ROADWAY.
6. USE FACTORY 90° ELBOWS TO/FROM JUNCTION BOXES ON ALL CONDUITS LARGER THAN 1 INCH.
7. ALL CONDUIT SHALL BE RMC UNLESS NOTED OTHERWISE. SEE SCHEDULE FOR SIZE.
8. INSTALL FLANGE, FRANGIBLE COUPLING AND FOUNDATION PER ALASKA STANDARD PLAN S-31.
9. INSTALL FOUNDATION IN SELECT MATERIAL, TYPE A (OR SUBBASE, GRADING F MATERIAL). THE CONTRACTOR SHALL EXCAVATE AND BACKFILL WITH GRAVEL 2 FEET BELOW AND SURROUNDING THE FOUNDATION.
10. LOCKS SHALL BE CORBIN NO. 2. TO MATCH EXISTING STATE CABINETS. FURNISH TWO KEYS WITH EACH LOCK.
11. INSTALL A GALVANIC ISOLATOR BETWEEN THE GALVANIZED STEEL "C" CHANNEL AND ALUMINUM CABINET. ISOLATOR SHALL BE 0.125" CLOSED-CELL NEOPRENE TAPE OR APPROVED EQUAL. PROVIDE A NEOPRENE SEALING WASHER BETWEEN HEX NUT AND INTERIOR OF CABINET WALL TO FASTEN "C" CHANNEL.
12. POST, "C" CHANNEL, RMC, HUBS, CONDUIT, BODIES, BUSHINGS, LOCKNUTS, AND MOUNTING HARDWARE (BOLTS, WASHERS, NUTS, FASTENERS, AND BRACKETS) SHALL BE HOT-DIPPED GALVANIZED AND MEET THE REQUIREMENTS OF THE SPECIAL PROVISIONS, SECTION 669.
13. INSTALL PORTABLE 710-800 WATTS, FAN FORCED, CORD CONNECTED, ELECTRIC HEATER, RITTAL MODEL 3105-430 OR EQUAL.
14. INSTALL SINGLE-STAGE THERMOSTATICALLY CONTROLLED HEATER CONNECTION POWER CORD RATED 16 AMPS AT 120 VAC, 30°F TO 100°F RANGE, SURE-STAT CAT #T118P OR EQUAL.

CBA2 CABINET DETAILS

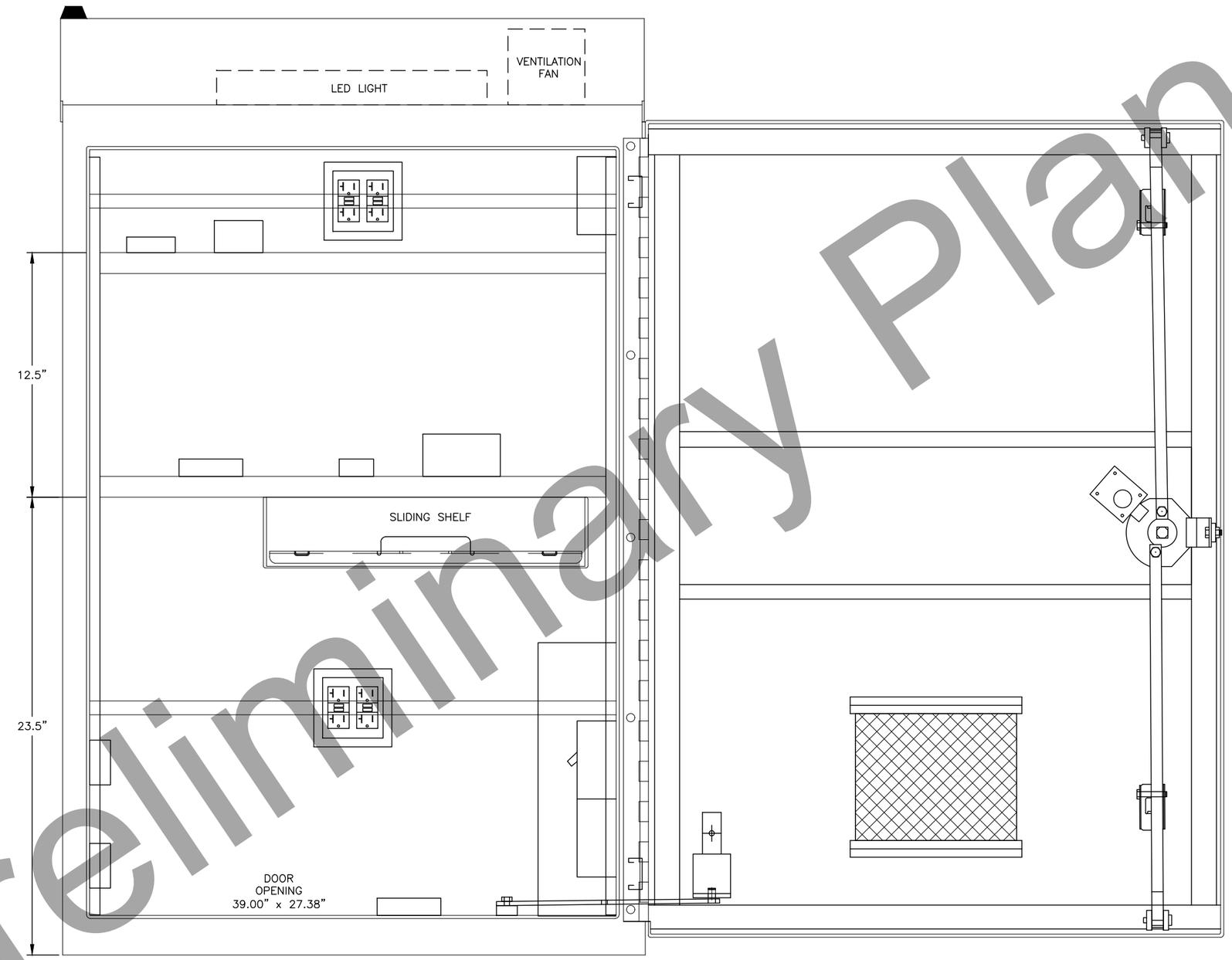
STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K7 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K8	K10



CABINET INTERIOR DETAILS
NTS

Preliminary Plans

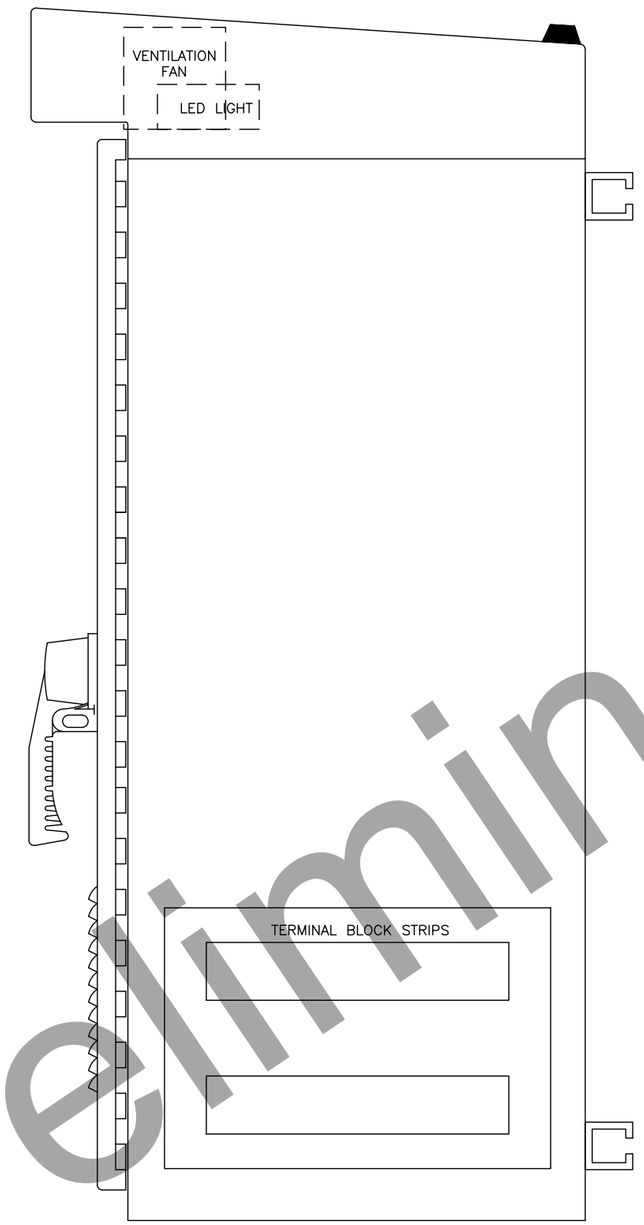
CBA2 CABINET DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
CE 14683
REGISTERED PROFESSIONAL ENGINEER

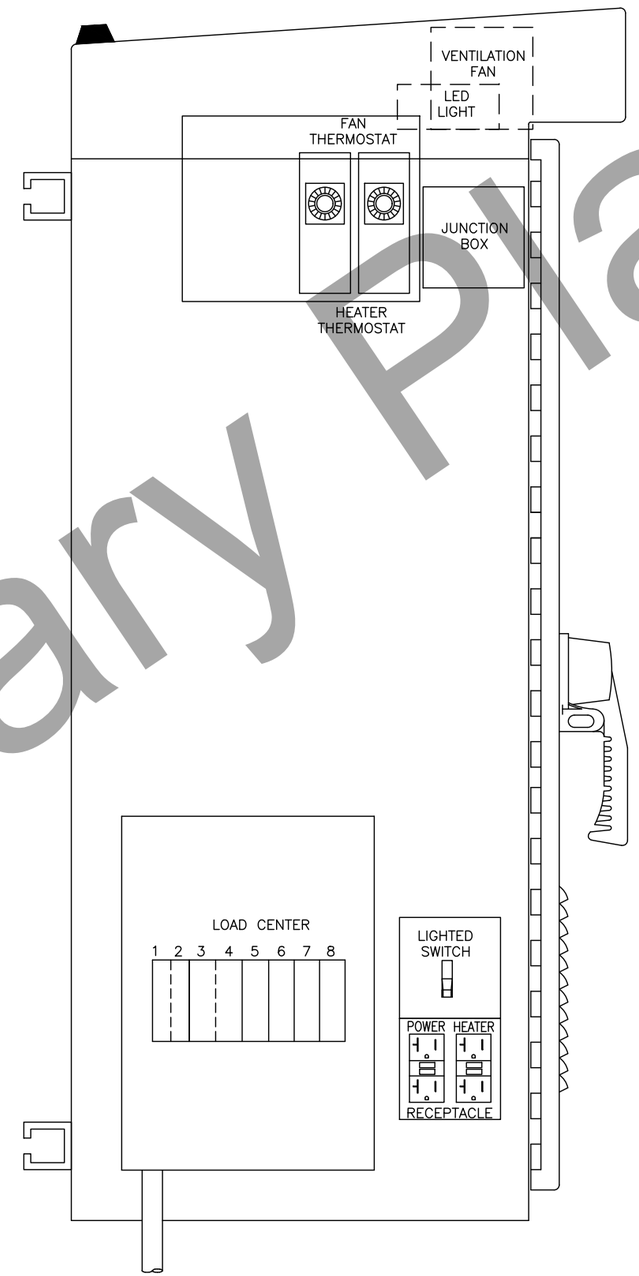
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K8 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	K9	K10



LEFT SIDE VIEW



RIGHT SIDE VIEW

CABINET INTERIOR DETAILS

NTS

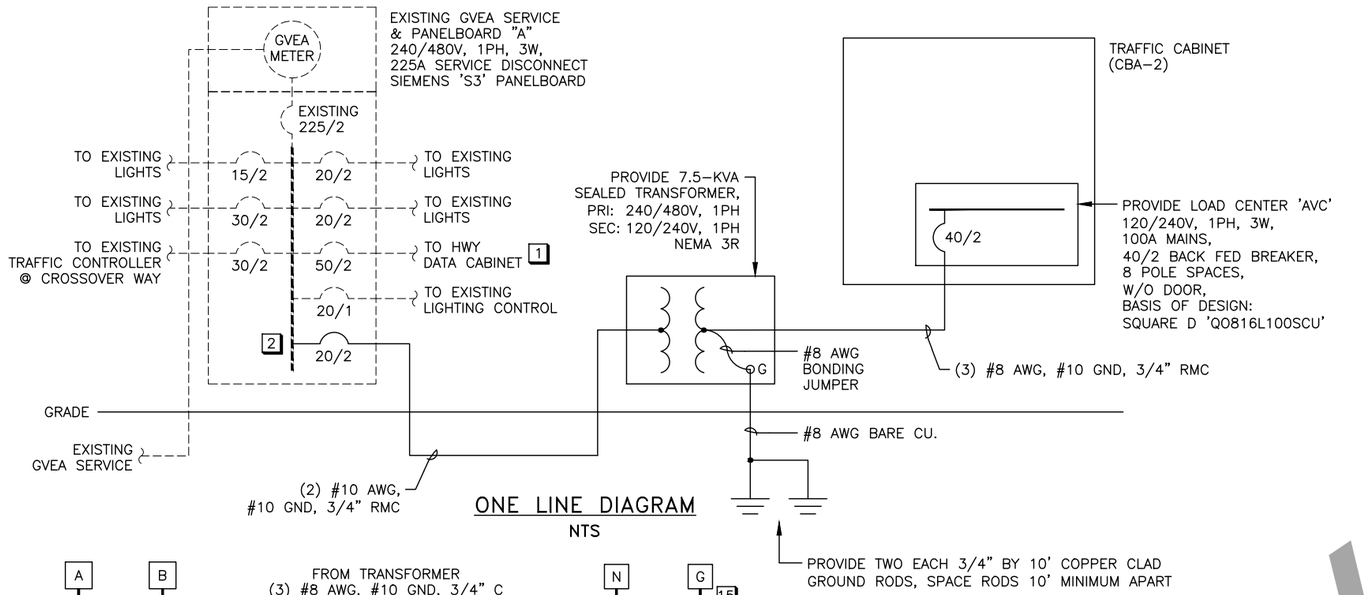
Preliminary Plans

CBA2 CABINET DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
CE 14683
LICENSED PROFESSIONAL ENGINEER

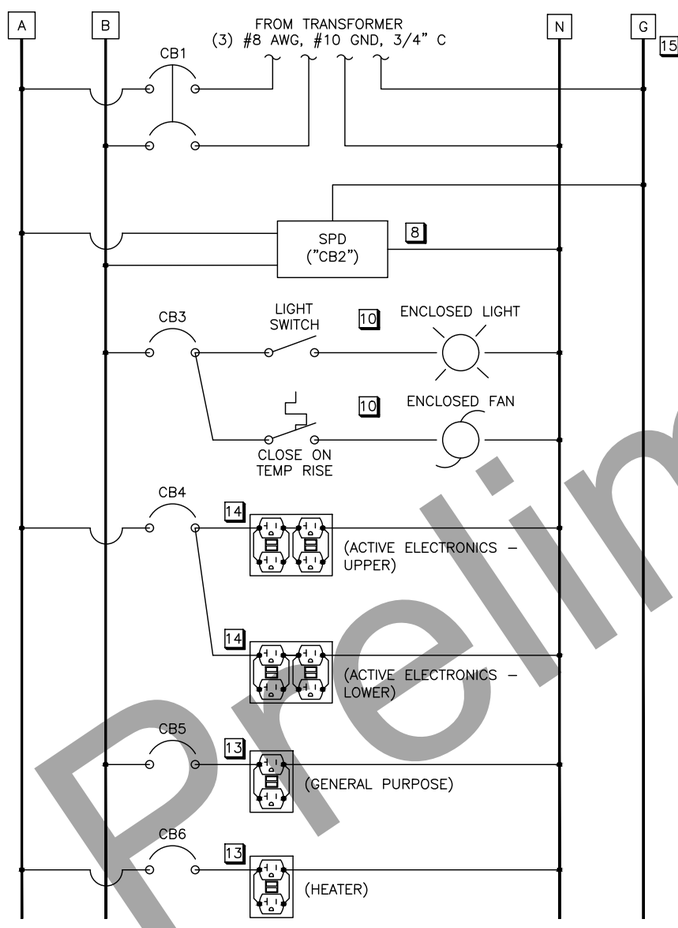
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395474\00645_K_AVC_DTL-K9 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0640013/NFHWY00645	2022	K10	K10



ONE LINE DIAGRAM

NTS



LOAD CENTER 'AVC' WIRING DIAGRAM

NTS

NOTES:

1. FIELD CONFIRM THAT THE 50/2 "HWY DATA CABINET" CIRCUIT SERVES THE EXISTING AVC CABINET. THE EXISTING BURIED ELECTRICAL FEEDER SERVING THE EXISTING AVC CABINET SHALL BE DISCONNECTED AT PANELBOARD 'A'. REMOVE THE CIRCUIT CONDUCTORS AND ABANDONED THE CONDUIT IN-PLACE. RE-LABEL THE CIRCUIT BREAKER AS "SPARE".
2. PROVIDE SIEMENS 'ED4' OR 'ED6' CIRCUIT BREAKER TO ENSURE COMPATIBILITY WITH THE SIEMENS PANELBOARD.
3. ALL BRANCH CIRCUITS WITHIN THE TRAFFIC CABINET SHALL UTILIZE METAL-CLAD (MC) CABLE. ALL PHASE, NEUTRAL, AND EQUIPMENT GROUNDING CONDUCTORS FOR 15 & 20 AMP BRANCH CIRCUITS SHALL UTILIZE MINIMUM #12 AWG CONDUCTORS.
4. SHARED NEUTRAL CONDUCTORS ARE NOT PERMITTED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR ALL CIRCUITS REQUIRING A NEUTRAL.
5. PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR FOR EACH CIRCUIT. UTILIZING THE RACEWAY AS THE ONLY EQUIPMENT GROUNDING CONDUCTOR IS NOT PERMITTED.
6. ALL CONDUCTORS SHALL UTILIZE MINIMUM XHHW INSULATION.
7. ALL ELECTRICAL EQUIPMENT, BOXES, AND BRANCH CIRCUITS WITHIN THE TRAFFIC CABINET SHALL BE FASTENED AND SECURED TO RAILS OR STRUT CHANNEL WITHIN THE CABINET, AND SHALL NOT PENETRATE THE CABINET SURFACE.
8. PROVIDE TYPE 2 SURGE PROTECTIVE DEVICE (SPD), MINIMUM RATED 22.5kA PER PHASE. SPD SHALL BE PLUGGED DIRECTLY INTO LOAD CENTER AND OCCUPY CIRCUIT POLE SPACES. BASIS OF DESIGN IS SQUARE D 'Q02175SB'.
9. ALL RECEPTACLES SHALL BE MINIMUM NEMA 5-20R, EXTRA HEAVY-DUTY, INDUSTRIAL GRADE, WEATHER-RESISTANT, WITH INTEGRAL CLASS A (4mA-6mA) GROUND-FAULT PROTECTION.
10. SEE SPECIFICATION, SECTION 669-2.02 FOR FURTHER INFORMATION REGARDING EQUIPMENT CONTAINED WITHIN TRAFFIC CABINET 'CBA-2'.
11. PROVIDE A TYPED & LAMINATED CIRCUIT SCHEDULE FOR ALL PANELBOARDS AND LOAD CENTERS ADDED OR OTHERWISE MODIFIED BY THIS PROJECT.
12. ON EACH RECEPTACLE FACEPLATE, PROVIDE A LABEL INDICATING PURPOSE (IE "HEATER", "GENERAL", "ELECTRONICS", ETC).
13. LOCATE THE GENERAL PURPOSE RECEPTACLE AND THE HEATER RECEPTACLE IN A SINGLE 4-SQUARE BOX AT THE BOTTOM OF THE CABINET. SEE SHEET K7-K9 FOR CABINET ELEVATIONS AND DETAILS.
14. LOCATE ONE DOUBLE-DUPLEX FOR ACTIVE ELECTRONICS AT THE TOP OF THE CABINET AND ONE AT THE BOTTOM OF THE CABINET, MOUNTED TO THE HORIZONTAL STRUT CHANNEL AT THE BACK OF THE CABINET. SEE SHEET K7-K9 FOR CABINET ELEVATIONS AND DETAILS.
15. NOT ALL GROUNDING CONNECTIONS ARE SHOWN IN THIS DETAIL. SEE NOTE 5.

LOAD CENTER 'AVC'

LOCATION:	COLLEGE RD, TRAFFIC CABINET	MAINS RATING:	100A
VOLTAGE RATING:	120/240V, 1PH	MCB RATING:	40A, TWO-POLE (BACK FED)
POWER SOURCE:	EXISTING PANELBOARD 'A'	INTERRUPTING RATING:	10,000A

CIRCUIT BREAKER NUMBER	BRANCH CIRCUIT BREAKER RATING	CIRCUIT PURPOSE	LOAD (VA)		
			ϕA	ϕB	TOTAL
CB1	40 AMP, 240V	MAIN CIRCUIT BREAKER (BACK FED)	~SEE TOTALS BELOW~		
CB2	240V, 2-POLE SLOTS	SURGE PROTECTIVE DEVICE	0	0	0
CB3	20 AMP, 120V	LIGHT & FAN	--	575	575
CB4	20 AMP, 120V	REC, ELECTRONICS (UPPER & LOWER)	375	--	375
CB5	20 AMP, 120V	REC, GENERAL PURPOSE	--	1,000	1,000
CB6	20 AMP, 120V	REC, PORTABLE HEATER	1,000	--	1,000
		CONNECTED LOAD:	1,375	1,575	2,950
		CONNECTED AMPS (@240V, 1PH):	5.7	6.5	12.3
		DEMAND LOAD [x125%]:	1,720	1,970	3,690
		DEMAND AMPS (@240V, 1PH) [x125%]:	7.2	8.2	15.4

Preliminary Plans

ELECTRICAL DETAILS

STATE OF ALASKA
PRELIMINARY PS&E
03-JUN-2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\922103\E\Drawings\00645_K_DA-K10 Fri, Jun/03/22 10:44am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N1	N7

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	NOYES SLOUGH NW RAMP #1806	NOYES SLOUGH SW RAMP #1807	TOTAL QUANTITY
501.2001.0001	Spall Repair	CS	SF	All Req'd	All Req'd	All Req'd
501.2002.0001	Crack Repair	CS	LF	All Req'd	All Req'd	All Req'd
503.2001.0000	Reinforcing Steel Repair	CS	LF	All Req'd	All Req'd	All Req'd
508.0001.0000	Waterproofing Membrane, Spray-Applied	LS	SF	2,350.25	1,761.60	4,111.85

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

GENERAL NOTES

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2019 Edition, with latest interim specifications.

Seismic design per US Federal Highway Administration Seismic Retrofitting Manual for Highway Bridges 1995.

LIVE LOAD:..... HL-93

SEISMIC PARAMETERS:..... AASHTO 7% probability of exceedance in 75 years.

REINFORCEMENT:..... ASTM A706, Grade 60, Fy = 60,000 psi
Space reinforcement evenly unless otherwise noted.

CONCRETE:..... Class A-A Concrete unless otherwise noted, f'c = 5000 psi

STRUCTURAL STEEL:..... ASTM A709, Grade 36T3, Fy = 36,000 psi
Galvanize structural steel in accordance with AASHTO M111 unless shown otherwise.

Existing stations, elevations and dimensions are based on as-built plans, and those plans may not show existing dimensions and conditions. Where dimensions of the proposed work depend on the existing bridge dimensions, field-verify the controlling dimensions and adjust proposed dimensions of the work to fit existing conditions.

PRELIMINARY PLAN

REHABILITATION

ABBREVIATIONS:

℄	= centerline	EA	= each	min.	= minimum
ℙ	= plate	Elev.	= elevation	MSE	= mechanically stabilized earth
&	= and	e.a.	= each face	n.f.	= near face
@	= at	e.w.	= each way	No.	= number
ø	= diameter	Ext.	= exterior	NW	= northwest
±	= approximate	F	= fixed	o.c.	= on center
Abut.	= abutment	f.f.	= front/air face	O.H.W.	= ordinary high water
Approx.	= approximate	f'c	= specified concrete compressive strength	pcf	= pounds per cubic foot
Alt.	= alternating			psf	= pounds per square foot
b.f.	= back/dirt face	Ft.	= feet	psi	= pounds per square inch
bot.	= bottom	Fy	= yield stress	R	= radius
Br.	= bridge	Galv.	= galvanize	R.O.W.	= right of way
btwn.	= between	H.S.	= high strength	RT.	= right
Brg.	= bearing	Hwy.	= highway	S.I.P.	= stay-in-place
C.A.	= center of gravity	ID	= internal diameter	spcs.	= space, spaces
C.I.P.	= cast in place	Int.	= interior	Sta.	= station
CJP	= complete joint penetration	Jt.	= joint	SF	= square feet
Clr.	= clear, clearance	K	= kips	SW	= southwest
CMP	= corrugated metal pipe	ksf	= 1000 pounds per square foot	SY	= square yard
CF	= cubic feet	ksi	= 1000 pounds per square inch	Std.	= standard
CY	= cubic yard	LBS or lb	= pounds	Symm.	= symmetric
Dia.	= diameter	LF	= linear foot	Typ.	= typical
Dwg.	= drawing	LS	= lump sum	w/	= with
E	= expansion	LT.	= left		
(E)	= existing	max.	= maximum		

Preliminary Plans

DESIGNED BY: Duane Davis	CHECKED: Checker	LAYOUT BY: Duane Davis	CHECKED BY: Checker
DRAWN BY: Drafter	CHECKED: Duane Davis	SPECIFICATIONS BY: Duane Davis	P S & E COMPARED: Checker
QUANTITIES BY: Duane Davis	CHECKED: JulieTibor	APPROVAL RECOMMENDED BY: Richard Pratt	

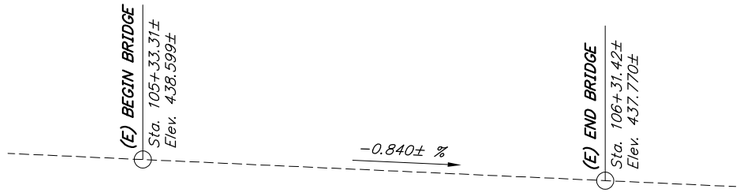
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

EAST COLLEGE ROAD RESURFACING
JOHANSEN EXPRESSWAY
GENERAL LAYOUT

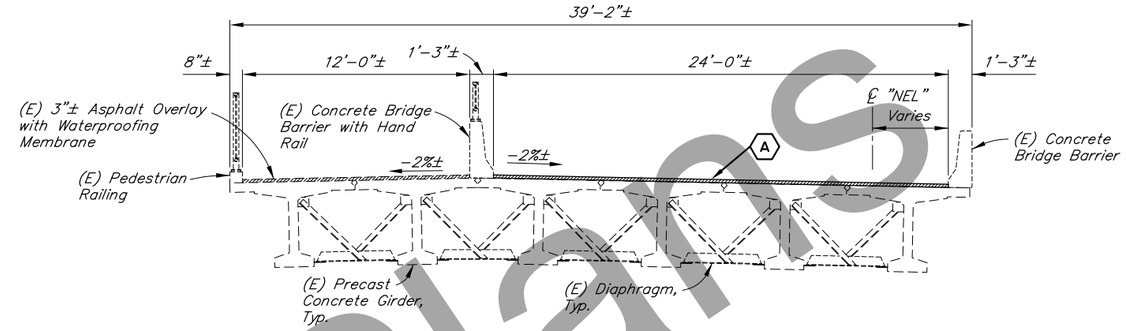
BRIDGE NO. 1806 1807
DWG. NO.

R:\cad\1806 & 1807\1806 Rehab 2022-ESTIMATE Fri, May/27/22 01:28pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N2	N7

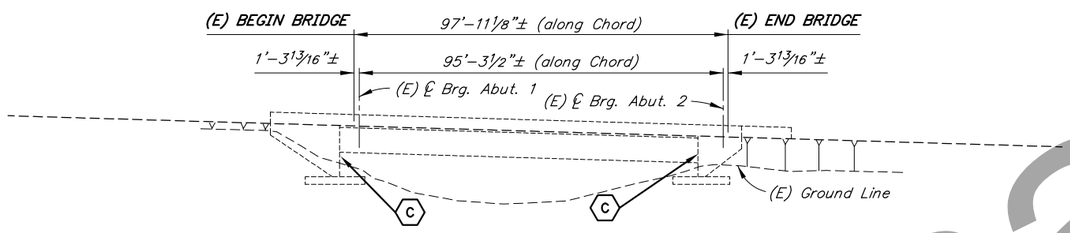


EXISTING PROFILE GRADE DATA
No Scale



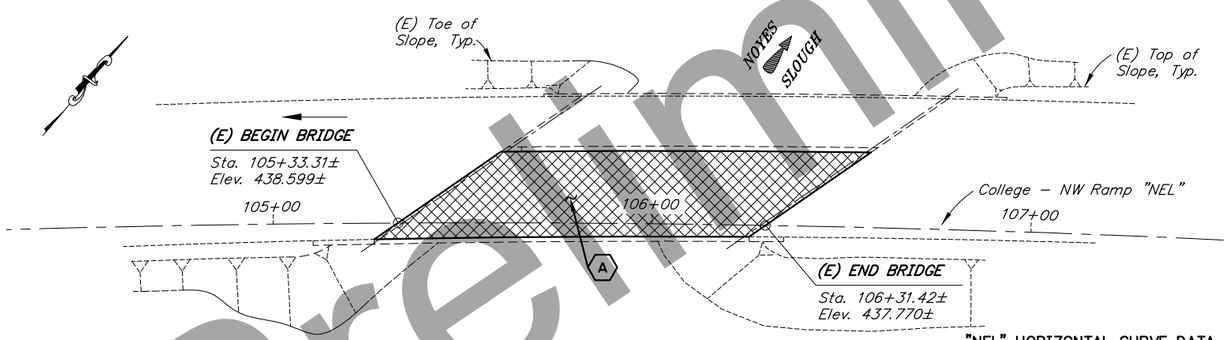
TYPICAL SECTION

12 0 4 8
In. Feet



ELEVATION

10 0 20 40
Feet



PLAN

10 0 20 40
Feet

"NEL" HORIZONTAL CURVE DATA

Sta. PI = 106+24.81
Δ = 6°23'48"
D = 1°19'40"
T = 241.12'
L = 481.75'
R = 4315.00'

BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
ASPHALT REPLACEMENT DETAILS	2
CONCRETE REPAIR DETAILS	3

LEGEND

A – Remove (E) asphalt overlay and waterproofing membrane. Install waterproofing membrane and 3" asphalt overlay.

C – Repair spalls in concrete abutment diaphragms and hiderwalls. Remove form ties and patch concrete. Chamfer corner edge spalls.

PRELIMINARY PLAN

REHABILITATION

NOTES:

(E) = Existing
– – – – – = Existing
——— = Proposed

1. For project stations and elevations, see roadway sheets.
2. Verify controlling field dimensions before ordering or fabricating any material.

Preliminary Plans

DESIGNED BY: Duane Davis	CHECKED: Checker	LAYOUT BY: Duane Davis	CHECKED BY: Checker
DRAWN BY: Drafter	CHECKED: Duane Davis	SPECIFICATIONS BY: Duane Davis	P S & E COMPARED: Checker
QUANTITIES BY: Duane Davis	CHECKED: Checker	APPROVAL RECOMMENDED BY: Rich Pratt	

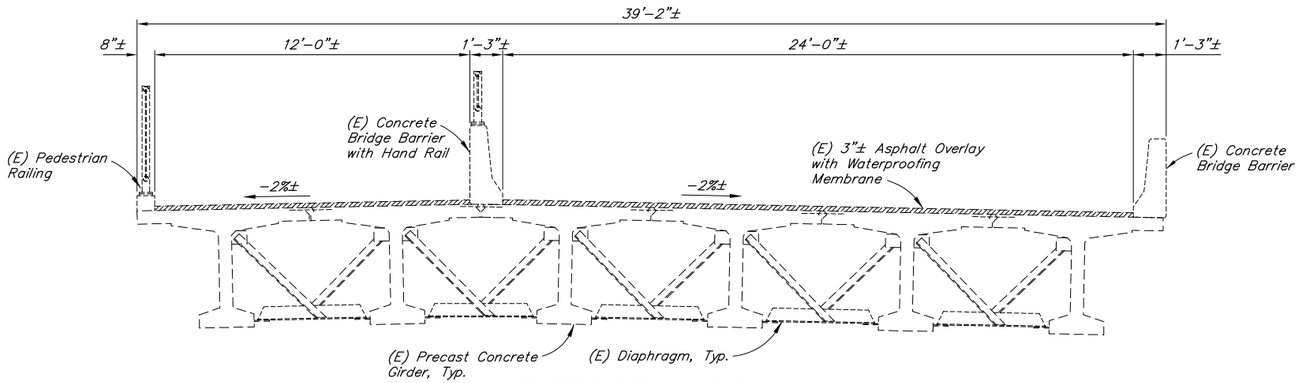
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

NOYES SLOUGH NW RAMP BRIDGE
JOHANSEN EXPRESSWAY
GENERAL LAYOUT

BRIDGE NO. 1806
DWG. NO. 1

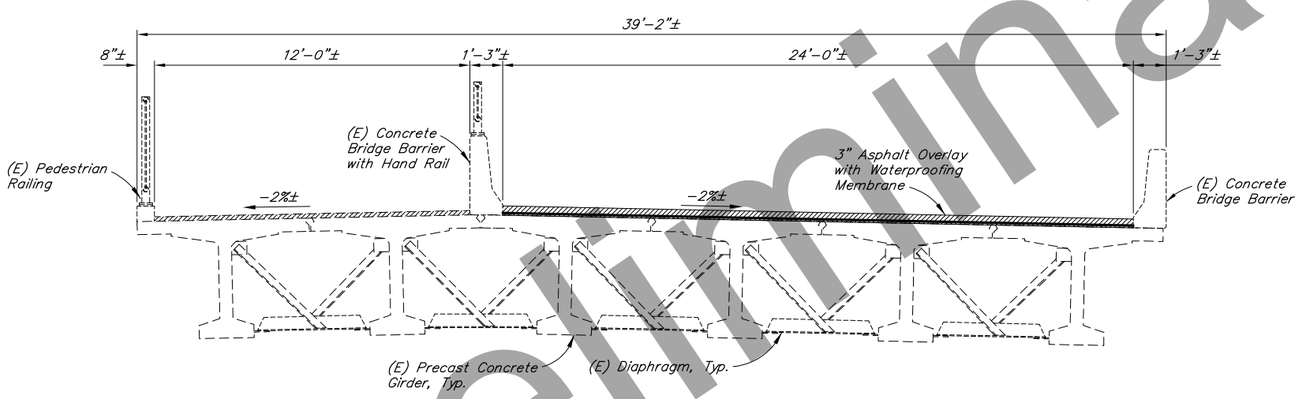
R:\cad\1806 & 1807\1806 Rehab 2022-GENERAL Fri, May/27/22 01:28pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N3	N7



EXISTING TYPICAL SECTION

12 0 1 2 3 4
In. Feet



PROPOSED TYPICAL SECTION

12 0 1 2 3 4
In. Feet

Preliminary Plans

PRELIMINARY PLAN

NOTES:

(E) = Existing
- - - - - - - = Existing
——— = Proposed

DESIGNED BY: Duane Davis	CHECKED: Checker	**REHABILITATION**	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975
DRAWN BY: Drafter	CHECKED: Duane Davis		
QUANTITIES BY: Duane Davis	CHECKED: Checker		

NOYES SLOUGH NW RAMP BRIDGE

JOHANSEN EXPRESSWAY

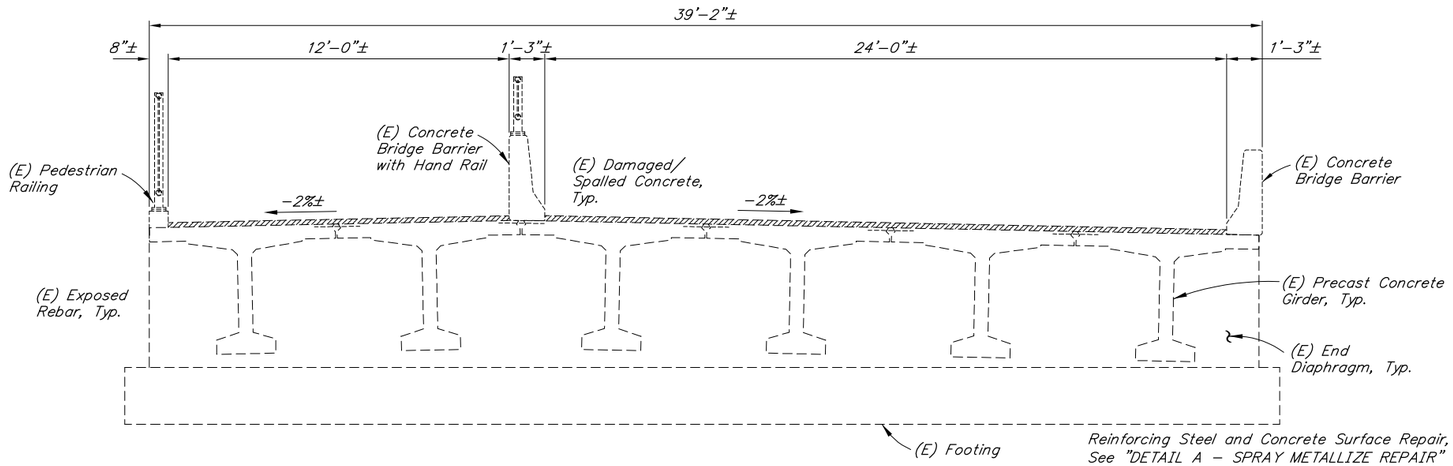
ASPHALT REPLACEMENT DETAILS

BRIDGE NO. 1806

DWG. NO. 2

R:\cad\1806 & 1807\1806 Rehab 2022-TYPICAL Fri, May/27/22 01:29pm

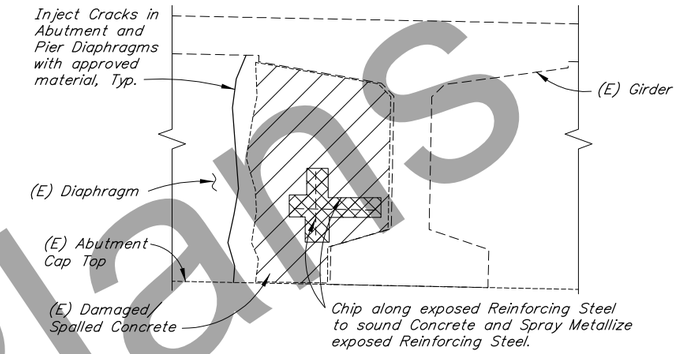
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N4	N7



Reinforcing Steel and Concrete Surface Repair, See "DETAIL A – SPRAY METALLIZE REPAIR" and "DETAIL B – ALTERNATE CONCRETE DIAPHRAGM PATCH REPAIR"

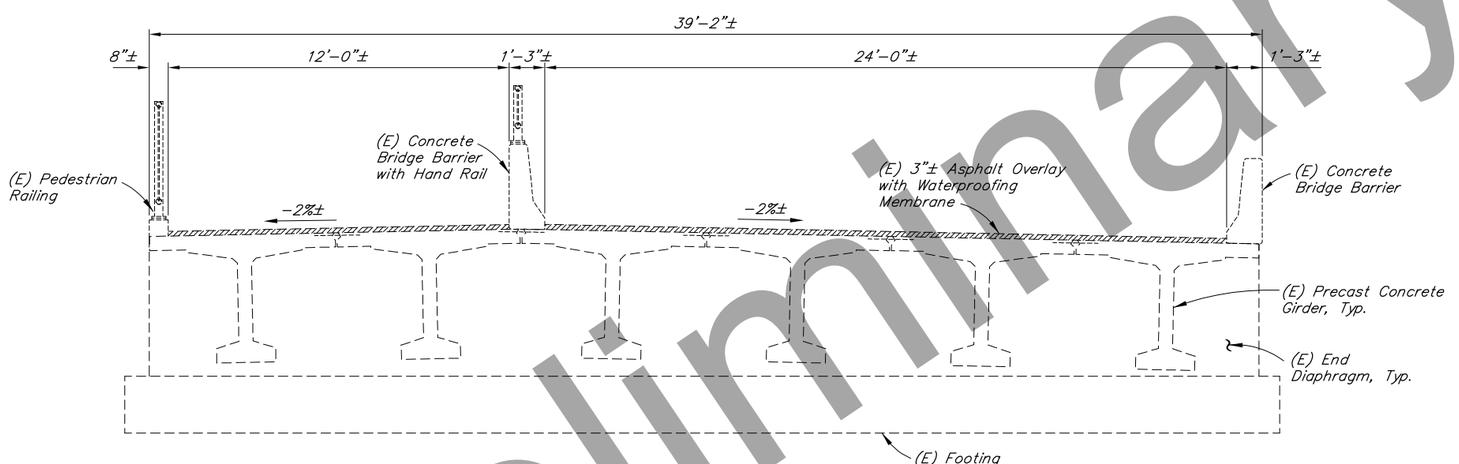
ABUTMENT 1

12 0 1 2 3 4
In. Feet



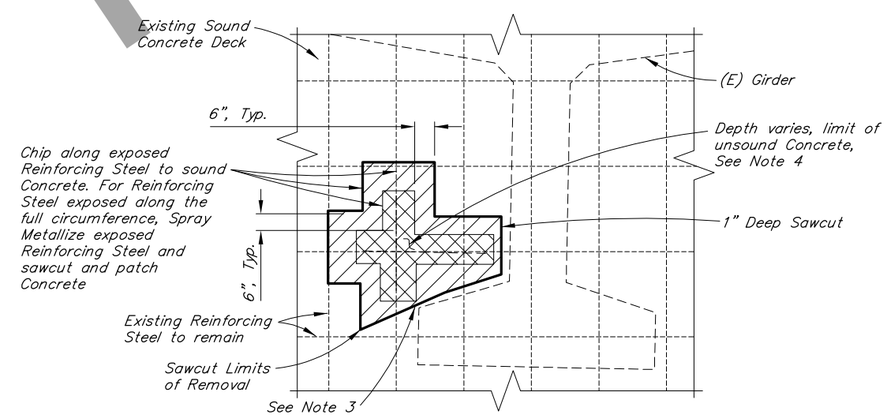
DETAIL A - SPRAY METALLIZE REPAIR

12 6 0 1 2
In. Feet



ABUTMENT 2

12 0 1 2 3 4
In. Feet



DETAIL B - ALTERNATE CONCRETE DIAPHRAGM PATCH REPAIR

No Scale

NOTES:

= Unsound Concrete
(E) = Existing
= Existing
= Proposed

1. Locations and sizes are for illustration purposes only.
2. Duplicate diaphragm repair details at the abutments.
3. Allow 2" clearance for sawcut adjacent to girder.
4. Depth of concrete removal varies. Chip to limits of sound concrete. Chip to ¾" below exposed rebar.

PRELIMINARY PLAN

Preliminary Plans

DESIGNED BY: Duane Davis	CHECKED: Checker		
DRAWN BY: Drafter	CHECKED: Duane Davis		
QUANTITIES BY: Duane Davis	CHECKED: Checker		

REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

NOYES SLOUGH NW RAMP BRIDGE

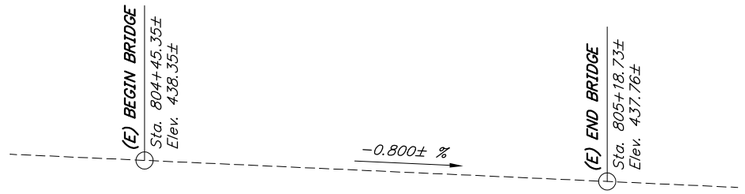
JOHANSEN EXPRESSWAY

CONCRETE REPAIR DETAILS

BRIDGE NO. 1806
DWG. NO. 3

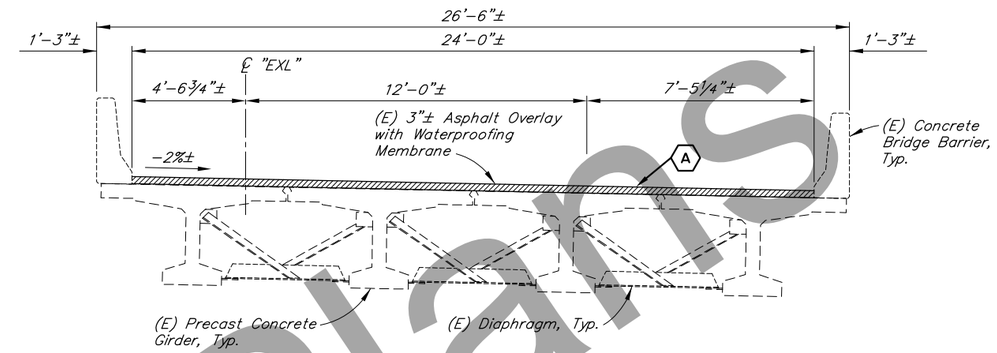
R:\cad\1806 & 1807\1806 Rehab 2022-CONCRETE REPAIR Fri, May/27/22 01:28pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N5	N7



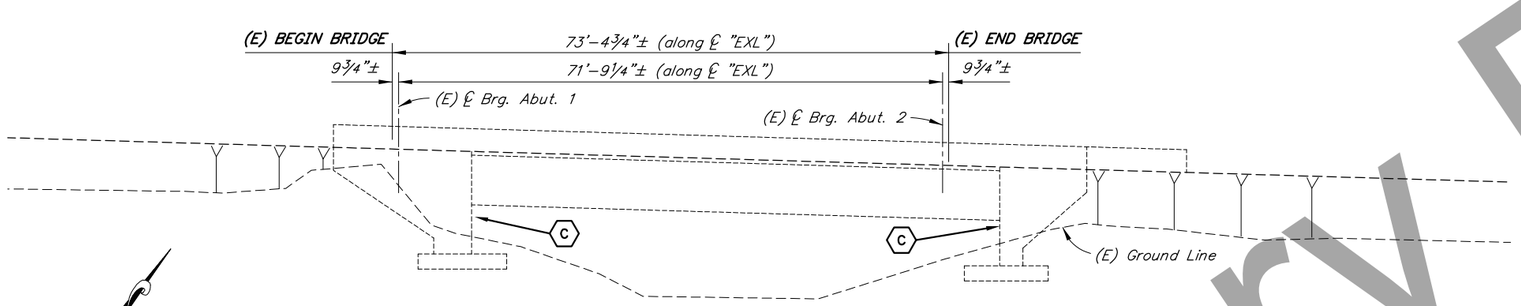
EXISTING PROFILE GRADE DATA

No Scale



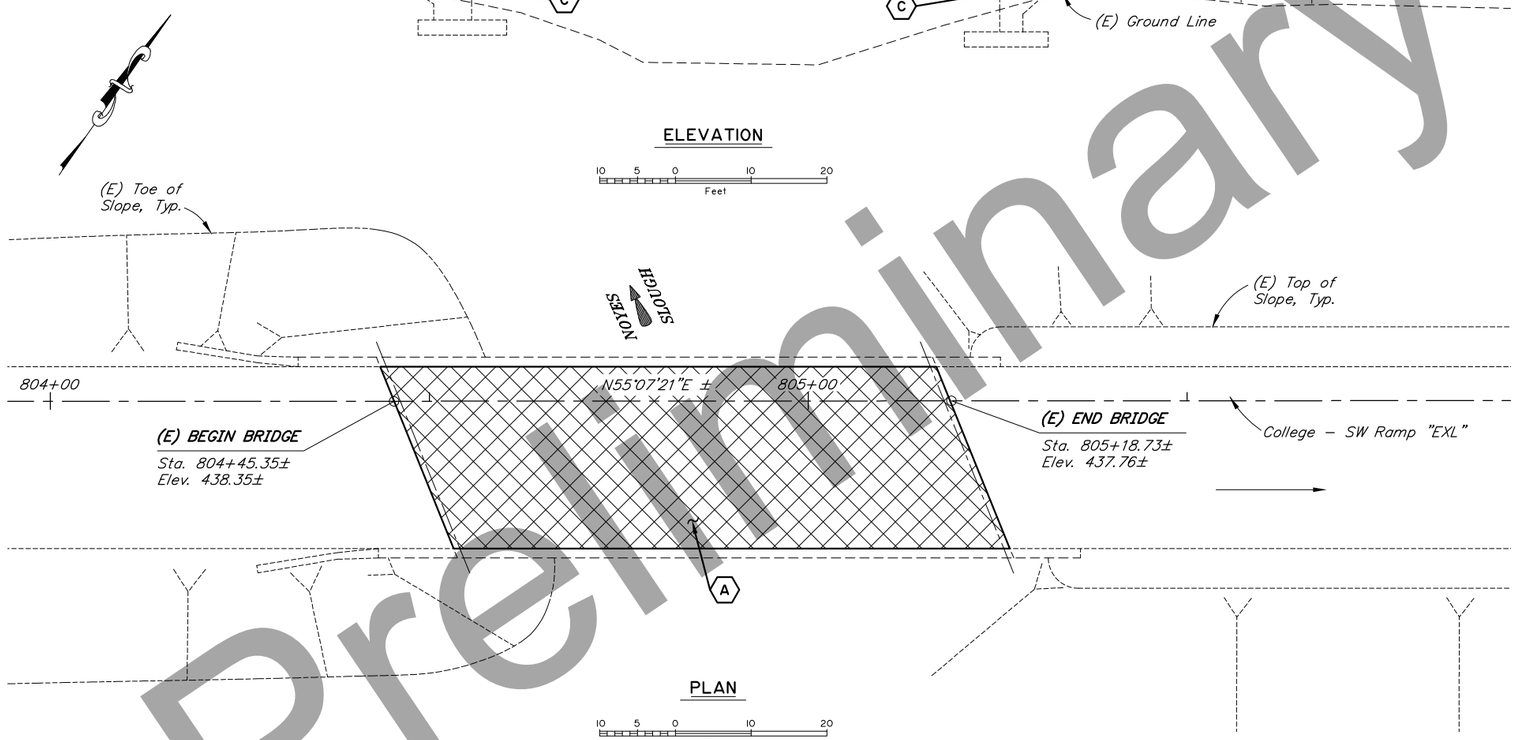
TYPICAL SECTION

12 0 4 8
In. Feet



ELEVATION

10 5 0 10 20
Feet



PLAN

10 5 0 10 20
Feet

BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
ASPHALT REPLACEMENT DETAILS	2
CONCRETE REPAIR DETAILS	3

LEGEND

A − Remove (E) asphalt overlay and waterproofing membrane. Install waterproofing membrane and 3" asphalt overlay.

C − Repair spalls in concrete abutment diaphragms and hiderwalls. Remove form ties and patch concrete. Chamfer corner edge spalls.

PRELIMINARY PLAN

REHABILITATION

NOTES:

(E) = Existing

− − − − − = Existing

——— = Proposed

1. For project stations and elevations, see roadway sheets.
2. Verify controlling field dimensions before ordering or fabricating any material.

Preliminary Plans

DESIGNED BY: Duane Davis	CHECKED: Checker	LAYOUT BY: Duane Davis	CHECKED BY: Checker
DRAWN BY: Drafter	CHECKED: Duane Davis	SPECIFICATIONS BY: Duane Davis	P S & E COMPARED: Checker
QUANTITIES BY: Duane Davis	CHECKED: Checker	APPROVAL RECOMMENDED BY: Rich Pratt	

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

NOYES SLOUGH SW RAMP BRIDGE

JOHANSEN EXPRESSWAY

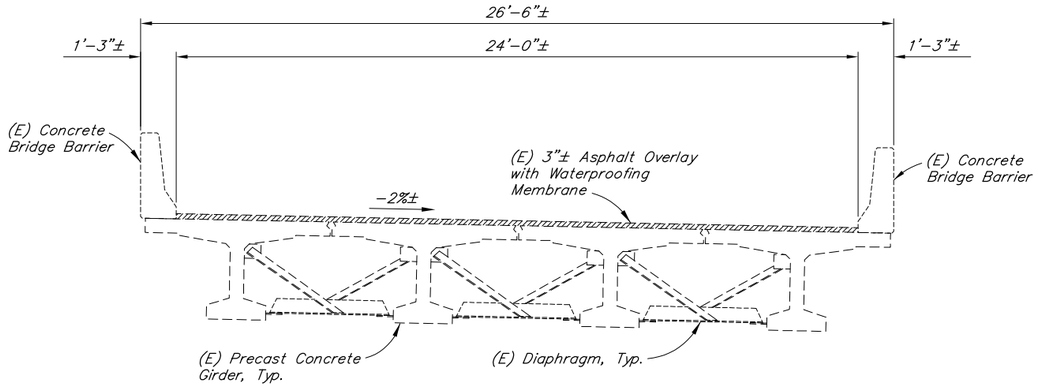
GENERAL LAYOUT

BRIDGE NO. 1807

DWG. NO. 1

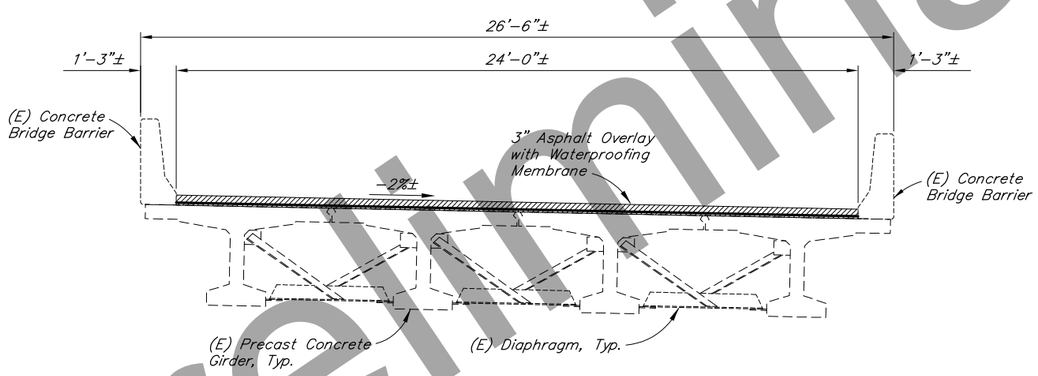
R:\cad\1806 & 1807\1807 Rehab 2022-GENERAL Fri, May/27/22 01:28pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N6	N7



EXISTING TYPICAL SECTION

12 0 1 2 3 4
In. Feet



PROPOSED TYPICAL SECTION

12 0 1 2 3 4
In. Feet

PRELIMINARY PLAN

NOTES:

(E) = Existing
- - - - - - - = Existing
——— = Proposed

Preliminary Plans

R:\cad\1806 & 1807\1807 Rehab 2022-TYPICAL Fri, May/27/22 01:28pm

DESIGNED BY: Duane Davis	CHECKED: Checker	**REHABILITATION**	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975
DRAWN BY: Drafter	CHECKED: Duane Davis		
QUANTITIES BY: Duane Davis	CHECKED: Checker		

NOYES SLOUGH SW RAMP BRIDGE

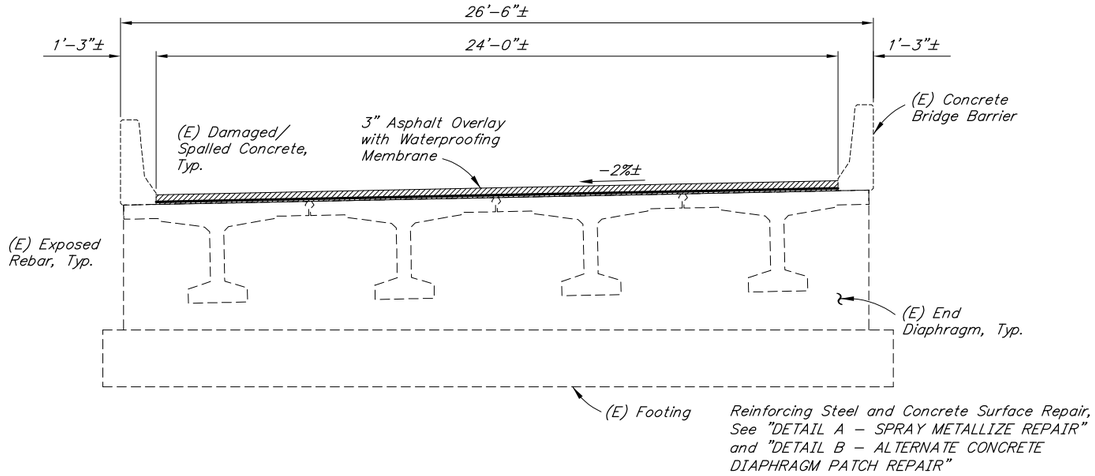
JOHANSEN EXPRESSWAY

ASPHALT REPLACEMENT DETAILS

BRIDGE NO. 1807

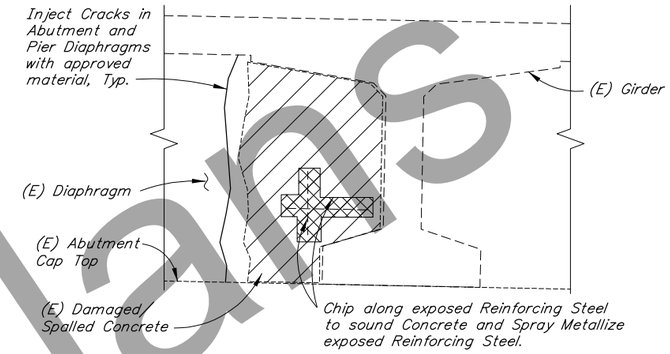
DWG. NO. 2

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013 / NFHWY00645	2022	N7	N7



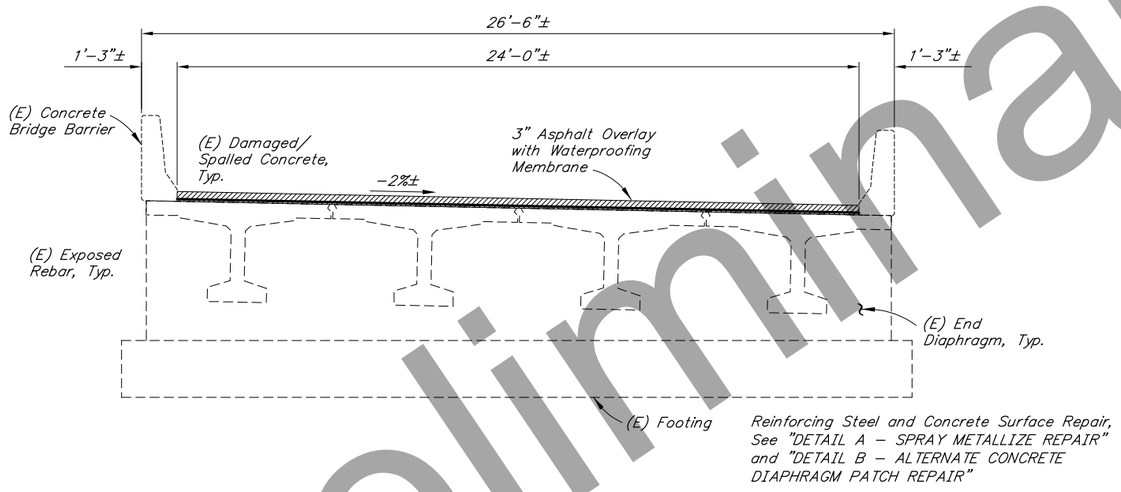
ABUTMENT 1

12 0 1 2 3 4
In. Feet



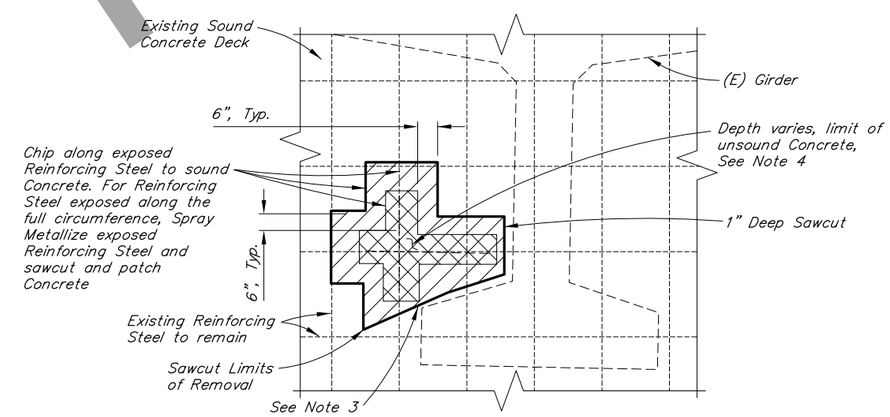
DETAIL A - SPRAY METALLIZE REPAIR

12 6 0 1 2
In. Feet



ABUTMENT 2

12 0 1 2 3 4
In. Feet



DETAIL B - ALTERNATE CONCRETE DIAPHRAGM PATCH REPAIR

No Scale

NOTES:

= Unsound Concrete
(E) = Existing
= Existing
= Proposed

1. Locations and sizes are for illustration purposes only.
2. Duplicate diaphragm repair details at the abutments.
3. Allow 2" clearance for sawcut adjacent to girder.
4. Depth of concrete removal varies. Chip to limits of sound concrete. Chip to ¾" below exposed rebar.

PRELIMINARY PLAN

Preliminary Plans

DESIGNED BY: Duane Davis	CHECKED: Checker		
DRAWN BY: Drafter	CHECKED: Duane Davis		
QUANTITIES BY: Duane Davis	CHECKED: Checker		

REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

NOYES SLOUGH SW RAMP BRIDGE

JOHANSEN EXPRESSWAY

CONCRETE REPAIR DETAILS

BRIDGE NO. 1807
DWG. NO. 3

R:\cad\1806 & 1807\1807 Rehab 2022-CONCRETE REPAIR Fri, May/27/22 01:28pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q1	Q11

GENERAL NOTES:

1. THIS EROSION AND SEDIMENT CONTROL PLAN (ESCP) IS A GENERAL PLAN FOR GUIDING THE DEVELOPMENT OF THE CONTRACTOR'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A TEMPLATE IS INCLUDED IN APPENDIX C OF THE CONTRACT. THE CONTRACTOR IS EXPECTED TO PROVIDE ADDITIONAL DETAILS AND BMP'S BASED ON THE CONTRACTOR'S ACTUAL SCHEDULE AND CONSTRUCTION METHODS, AS REQUIRED TO COMPLY WITH THE 2021 CONSTRUCTION GENERAL PERMIT (CGP) AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. A SWPPP AND HAZARDOUS MATERIAL CONTROL PLAN (HMCP) ARE REQUIRED FOR THIS PROJECT.
3. EROSION AND SEDIMENT CONTROL FEATURES MUST BE BASED ON DOT&PF'S 2021 SWPPP GUIDE (MARCH 2021 OR LATEST VERSION) AND LATEST BEST MANAGEMENT PRACTICES (BMPs)
4. INITIATE EROSION AND SEDIMENT CONTROLS PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
5. DEVICES MAY NEED TO BE REMOVED AND REINSTALLED TO ALLOW CONSTRUCTION ACTIVITIES TO PROCEED. MAINTAIN ALL DEVICES DAILY, INCLUDING BUT NOT LIMITED TO: REMOVAL AND DISPOSAL OF ACCUMULATED SOILS, CLEANING DEVICES, AND REPLACEMENT OF DAMAGED DEVICES.
6. STOCKPILE AND/OR STAGING AREAS MUST BE RECLAIMED TO THEIR ORIGINAL CONDITIONS. STOCKPILES AND/OR STAGING AREAS ARE NOT ALLOWED IN WETLANDS.
7. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPES DURING HAULING ACTIVITIES.
8. PROVIDE CONCRETE WASHOUT FACILITIES.
9. PROVIDE VEHICLE CLEANING EQUIPMENT OR OTHER APPROVED CONTROLS TO PREVENT TRACKING OF DIRT AND GRAVEL ONTO PAVED SURFACES.
10. PROVIDE INLET PROTECTION AT ALL INLETS IN AND ADJACENT TO WORK AREAS.
11. AVOID UNNECESSARY GROUND DISTURBANCE AND MAINTAIN NATIVE VEGETATION WHERE PRACTICABLE THROUGH THE USE OF BMPs AND DOT&PF REVIEW OF PROPOSED SWPPP.
12. FOLLOW BMPs, SOPs, AND THE SWPPP TO AVOID IMPACTS TO A CONTAMINATED SITES IF THE AREA MUST BE USED FOR CONSTRUCTION STAGING. DEVELOP A CONTINGENCY PLAN IN THE EVENT THAT A CONTAMINATION IS UNEXPECTEDLY ENCOUNTERED, AND PHASE UNDERGROUND CONSTRUCTION WORK IN KNOWN GROUNDWATER–CONTAMINATED AREAS DURING PERIODS OF LOW GROUNWATER.
13. VEGETATIVE BUFFERS IS THE PREFERRED METHOD OF PERIMETER CONTROL FOR THIS PROJECT. WHERE VEGETATION IS NOT 25 FEET WIDE, THEN A BMP MUST BE INSTALLED FOR PERIMETER CONTROL.
14. SWEEP CLEAN STABILIZED CONSTRUCTION EXITS EACH SHIFT OR AS DIRECTED BY THE ENGINEER.

ESCP LEGEND

	SURFACE STORMWATER FLOW		SEDIMENT BARRIER
	PROFILE STORMWATER FLOW	VBS	VEGETATION BUFFER
	SYSTEM MANUFACTURED INLET PROTECTION		

Preliminary Plans

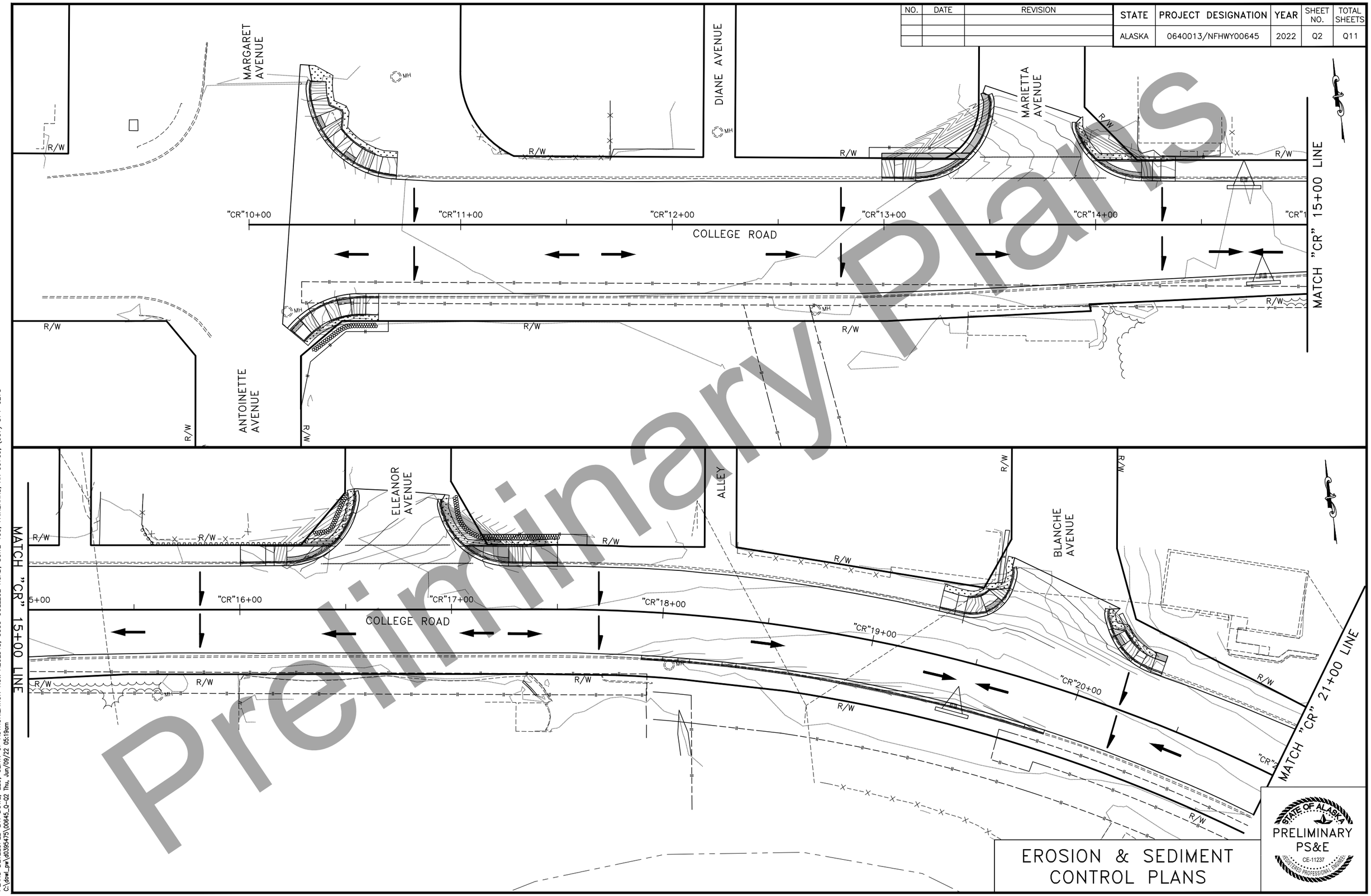
EROSION & SEDIMENT CONTROL PLANS

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-01 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q2	Q11



EROSION & SEDIMENT CONTROL PLANS

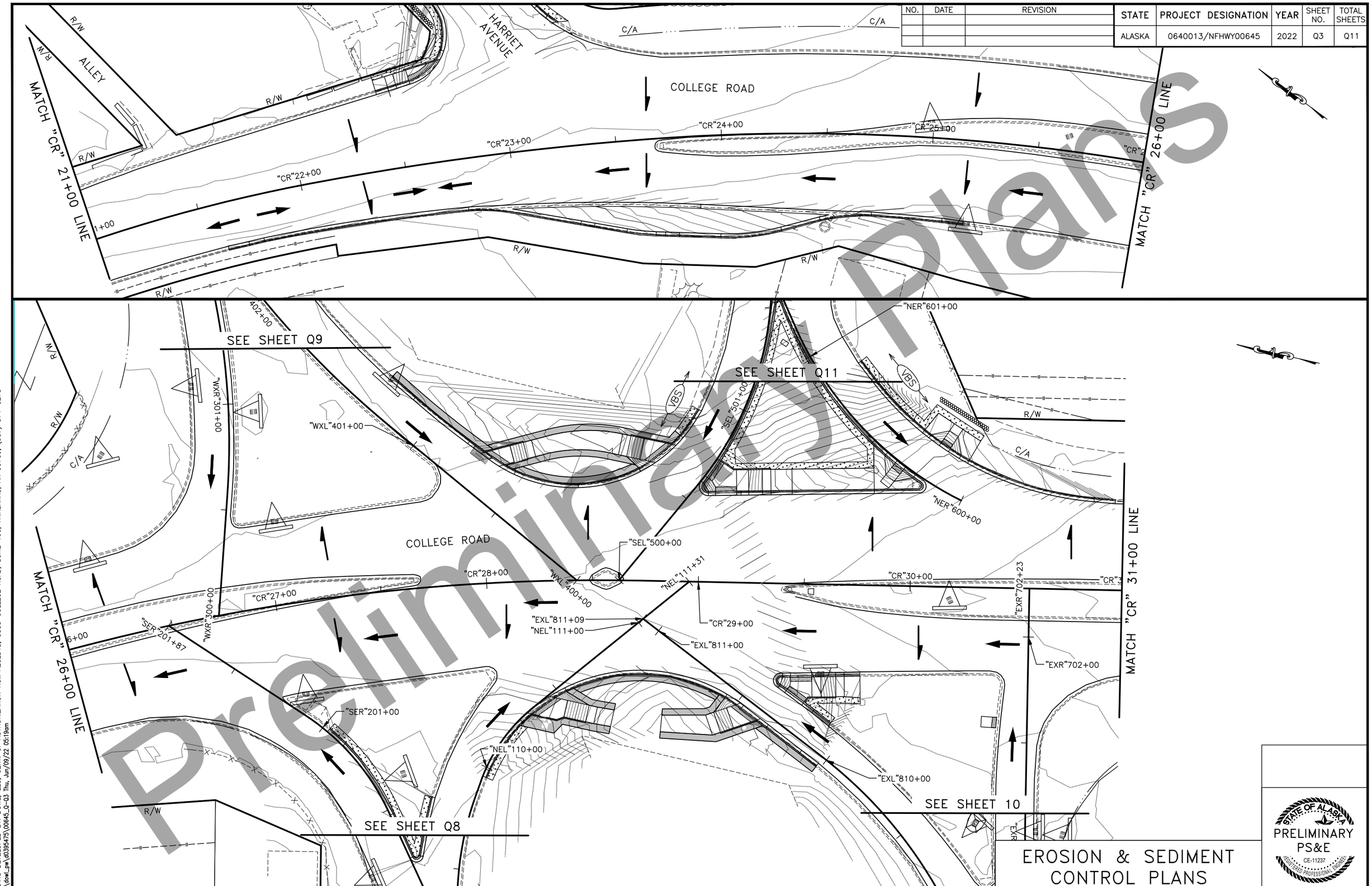
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-Q2 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q3	Q11



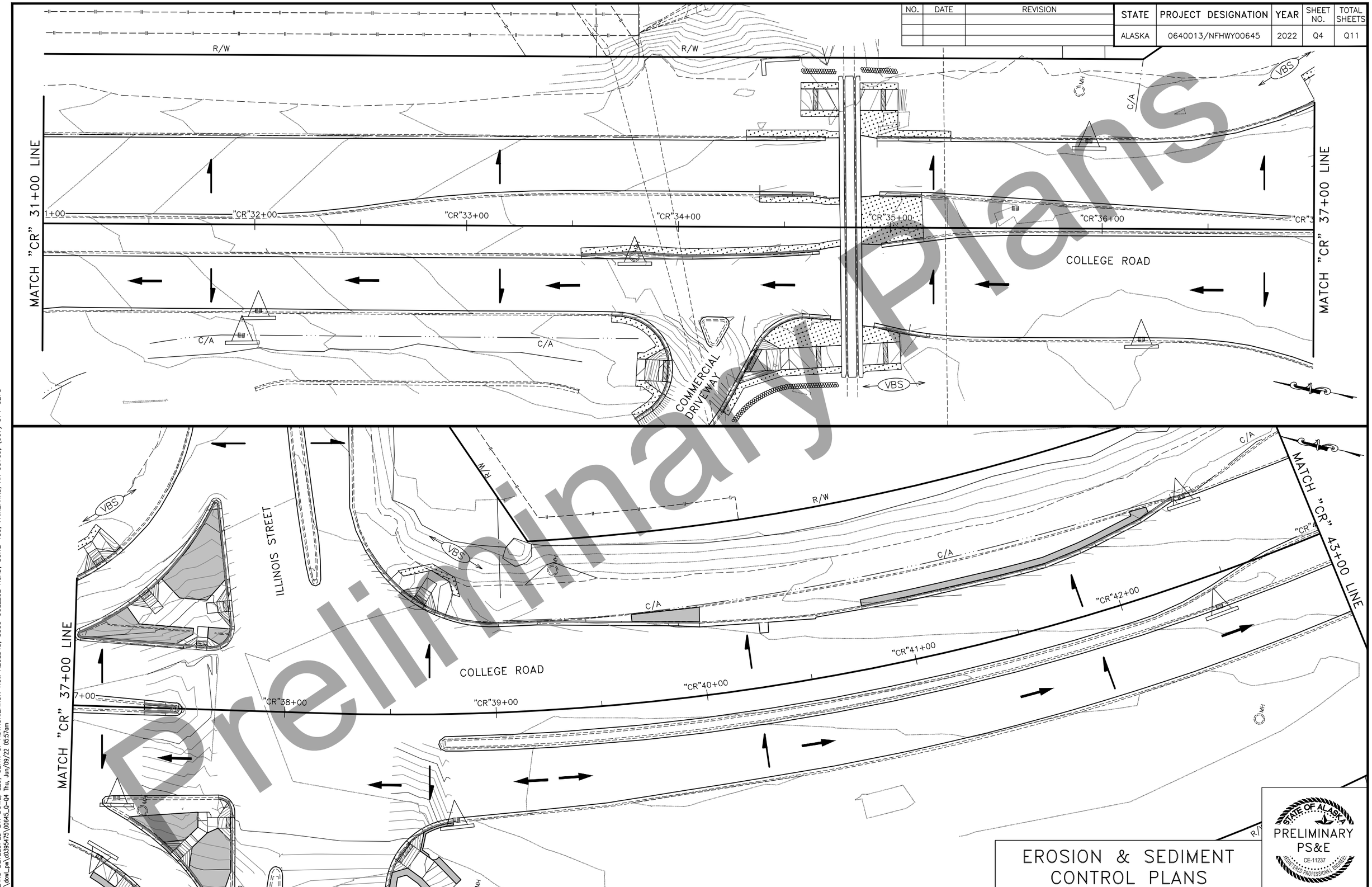
EROSION & SEDIMENT CONTROL PLANS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\0645_Q-03 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q4	Q11



Preliminary Plans

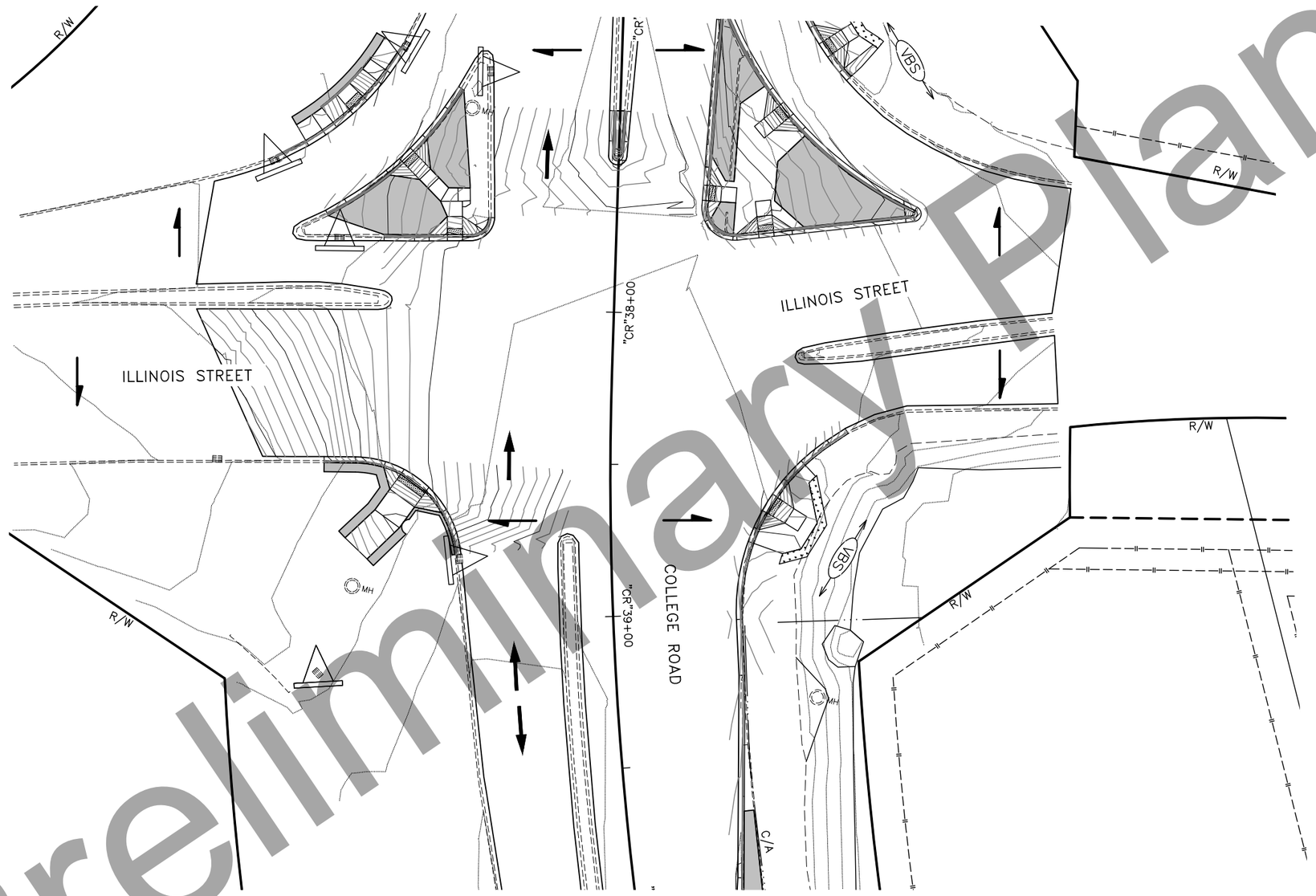
EROSION & SEDIMENT CONTROL PLANS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-Q4 Thu, Jun/09/22 05:57am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q5	Q11



Preliminary Plans

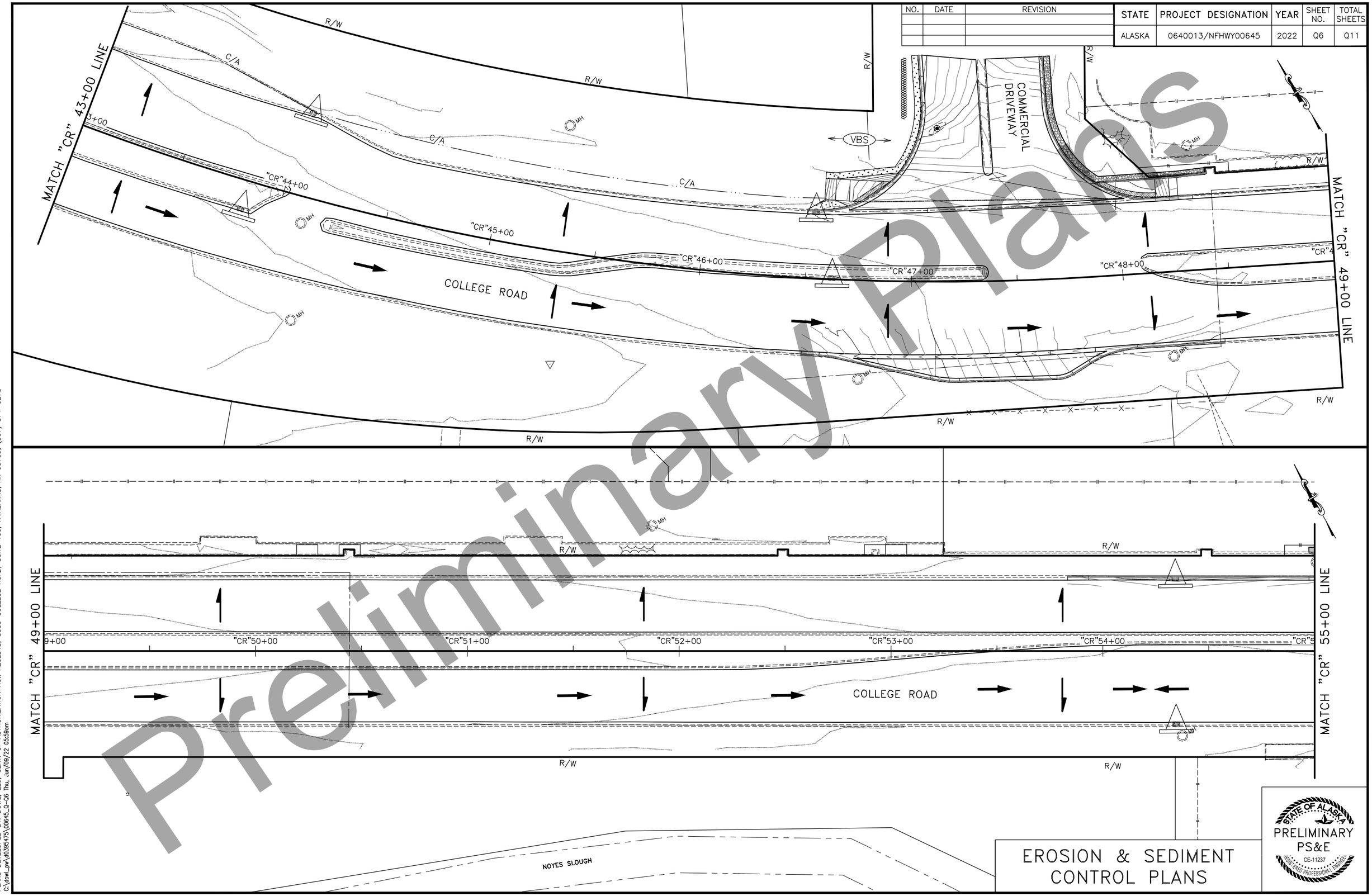
EROSION & SEDIMENT CONTROL PLANS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-05 Thu, Jun/09/22 05:19am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q6	Q11



EROSION & SEDIMENT CONTROL PLANS

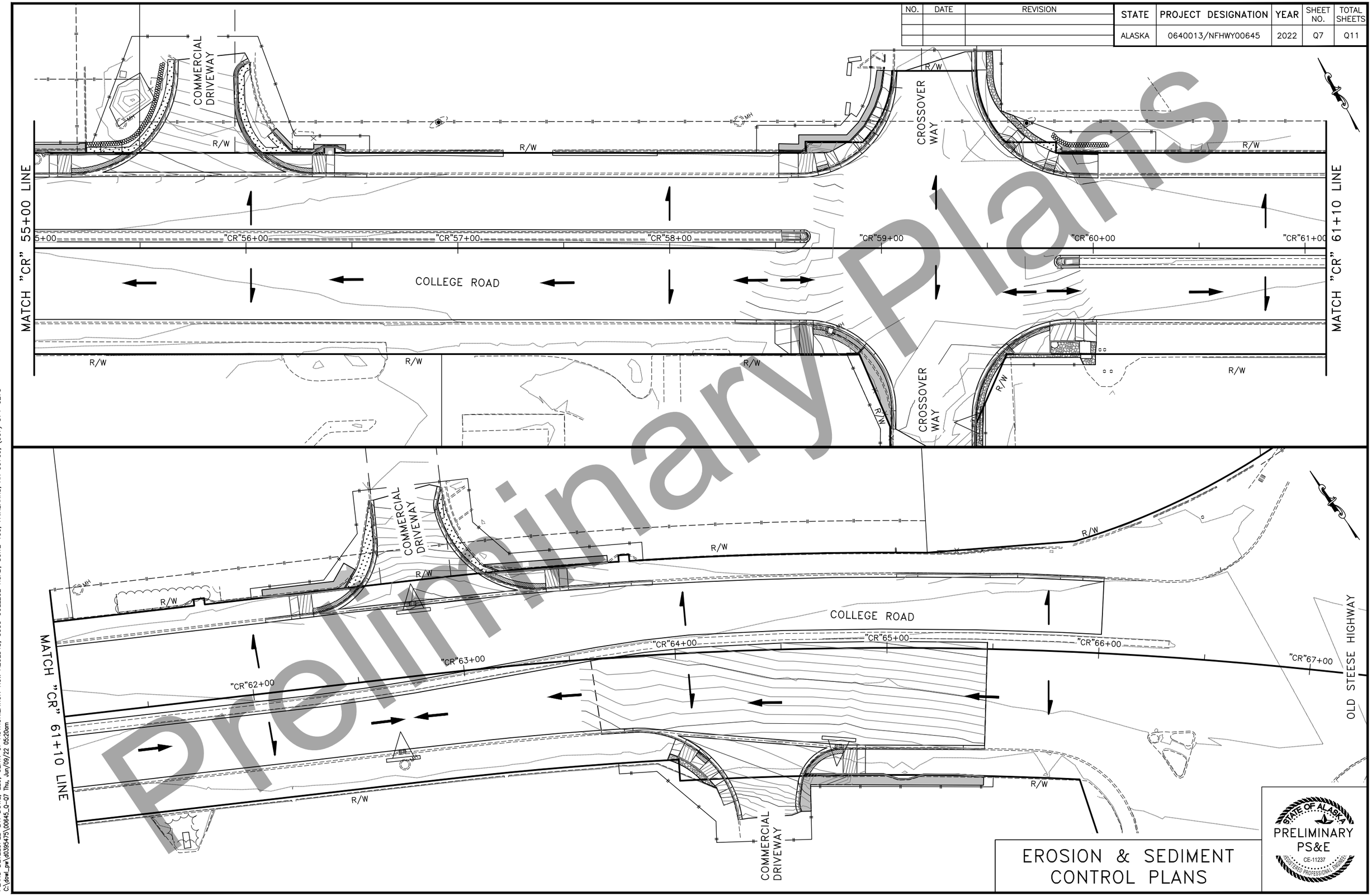
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
LICENSED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-06 Thu, Jun/09/22 05:59am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q7	Q11



Preliminary Plans

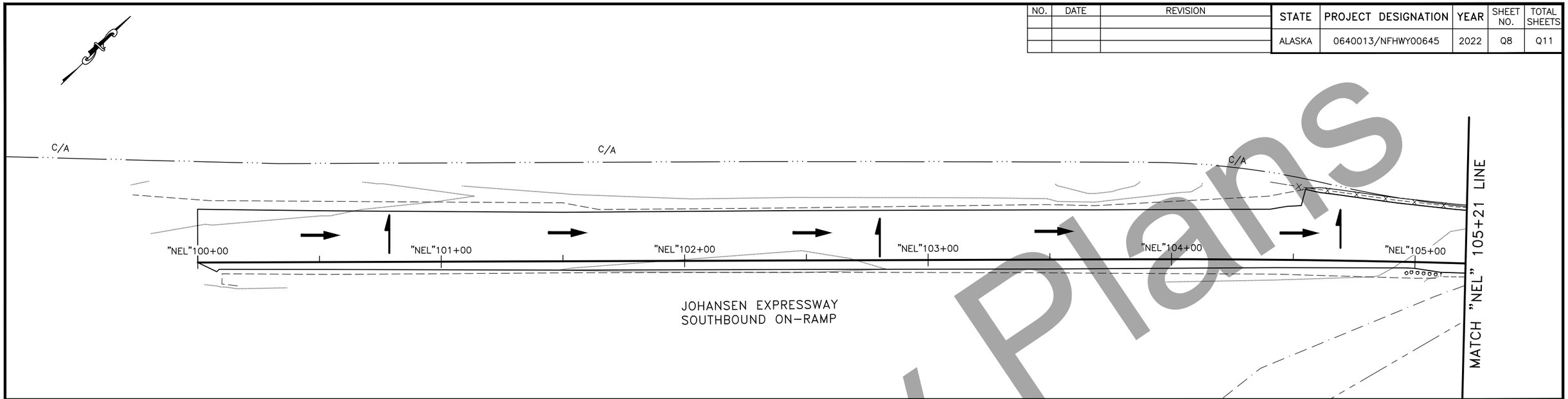
EROSION & SEDIMENT CONTROL PLANS

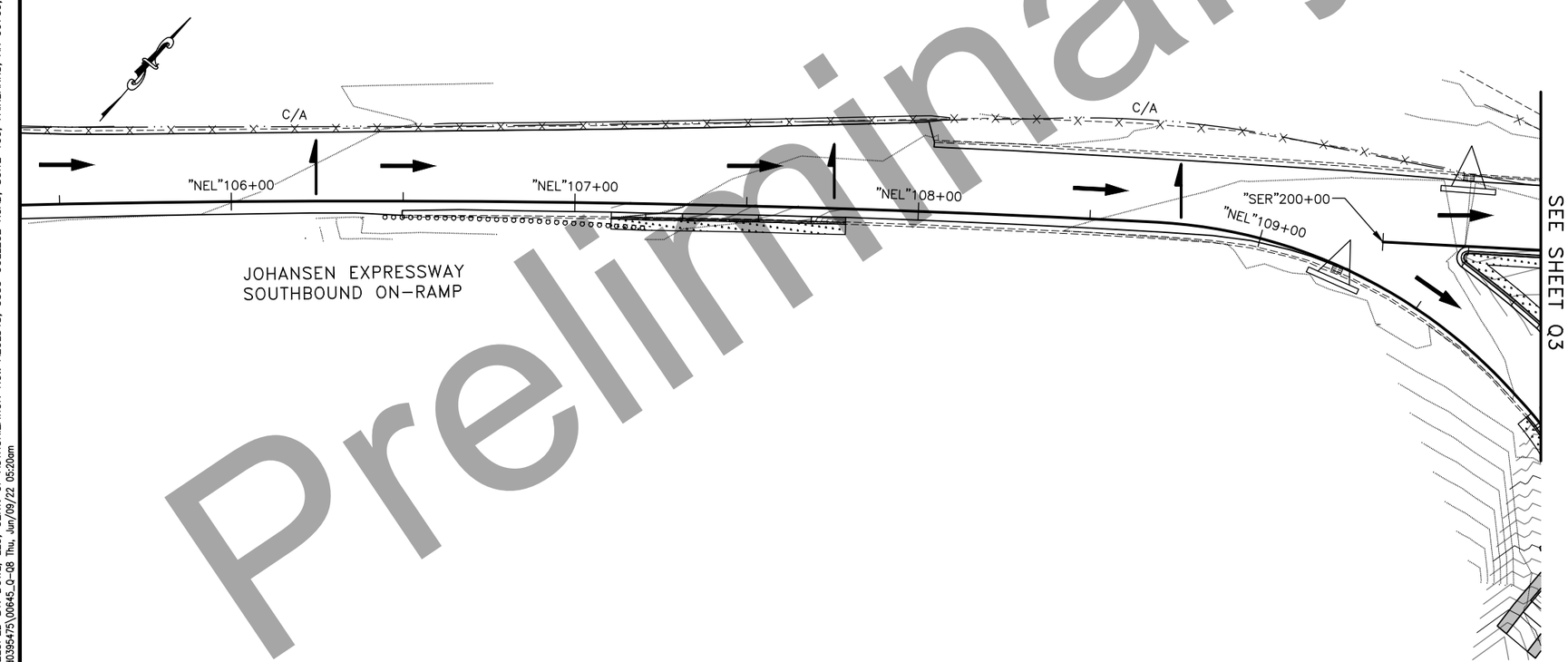
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-07 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q8	Q11





EROSION & SEDIMENT CONTROL PLANS

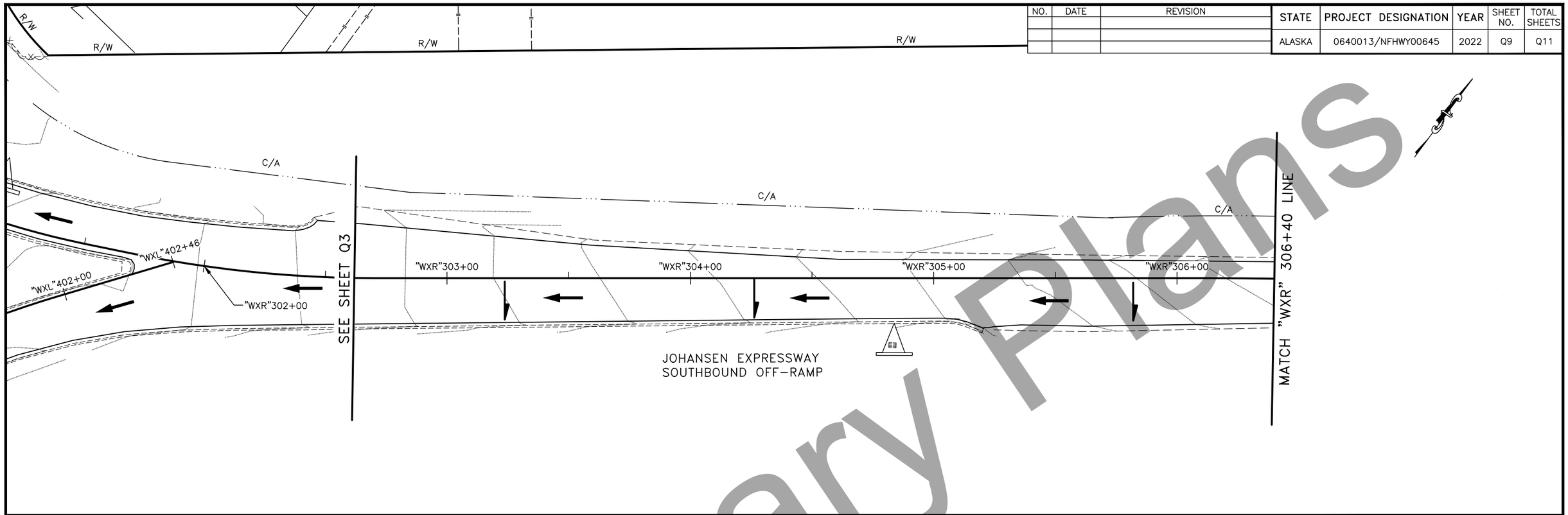
STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

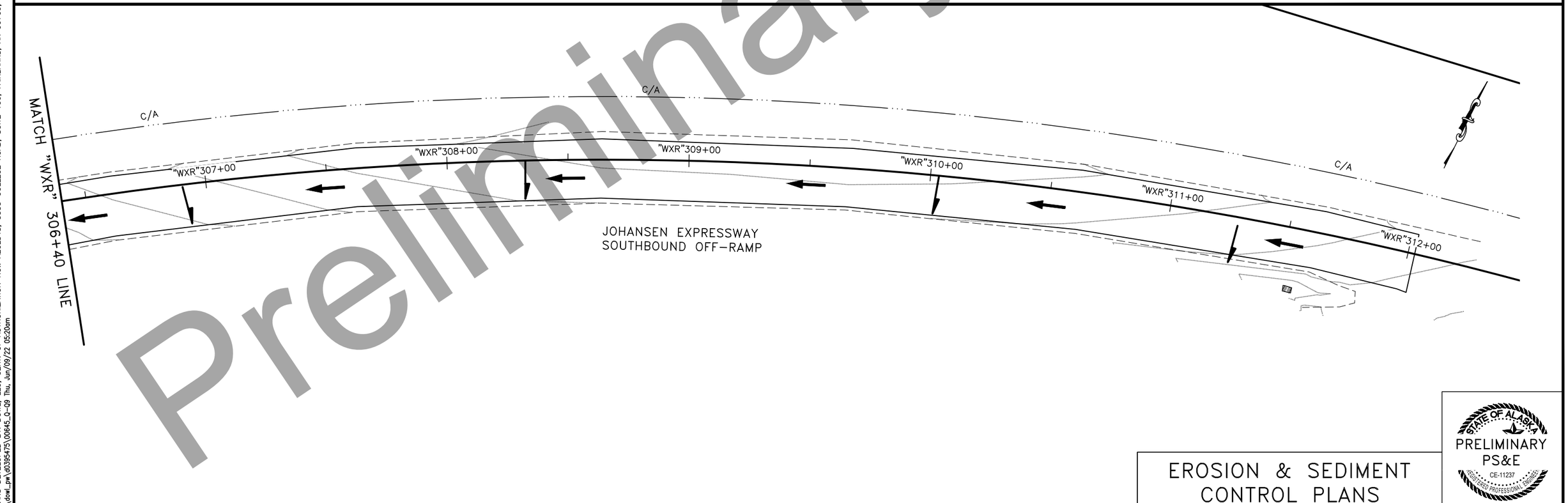
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-08 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q9	Q11





EROSION & SEDIMENT CONTROL PLANS

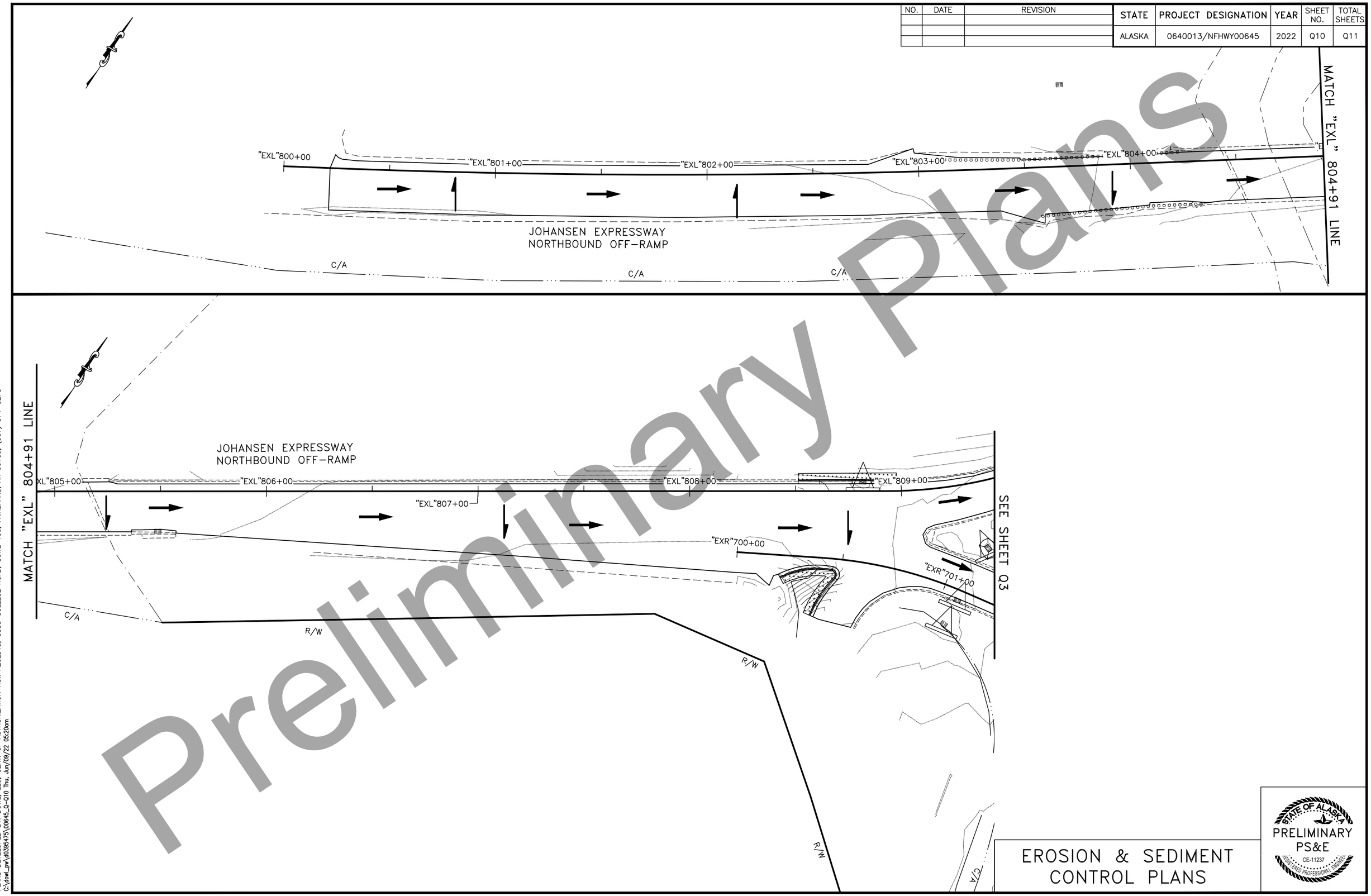
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-Q9 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q10	Q11



Preliminary Plans

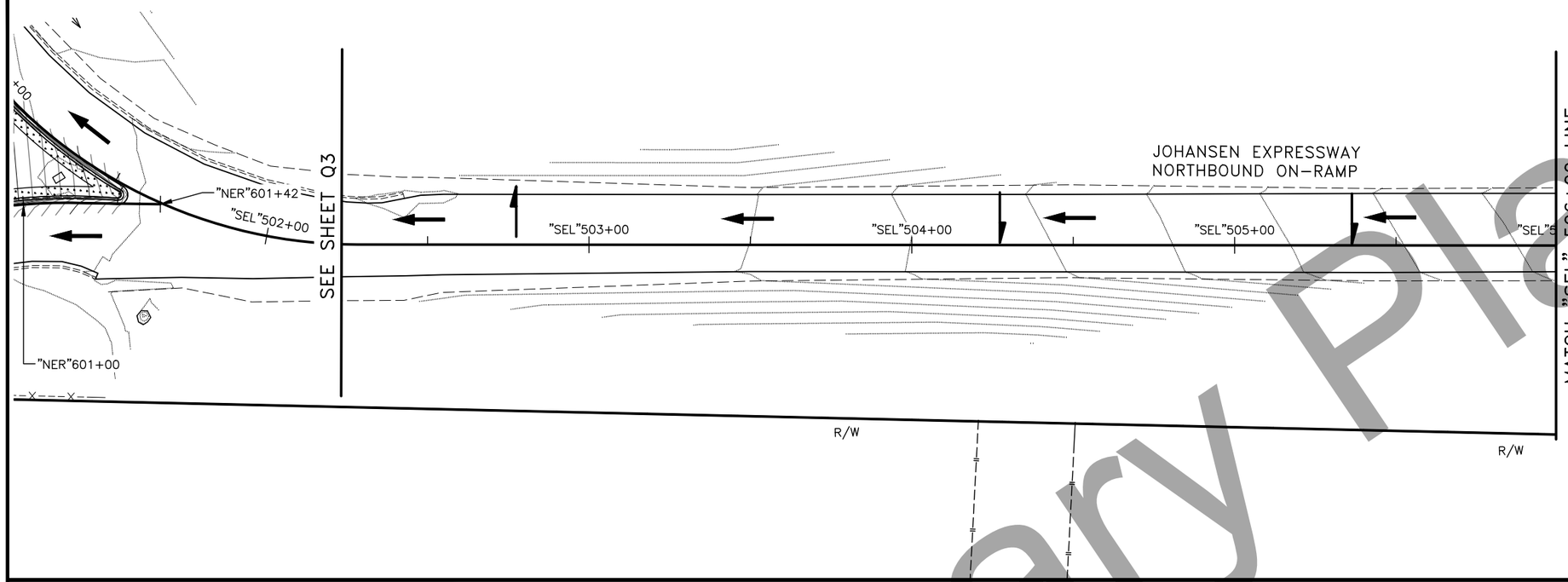
EROSION & SEDIMENT CONTROL PLANS

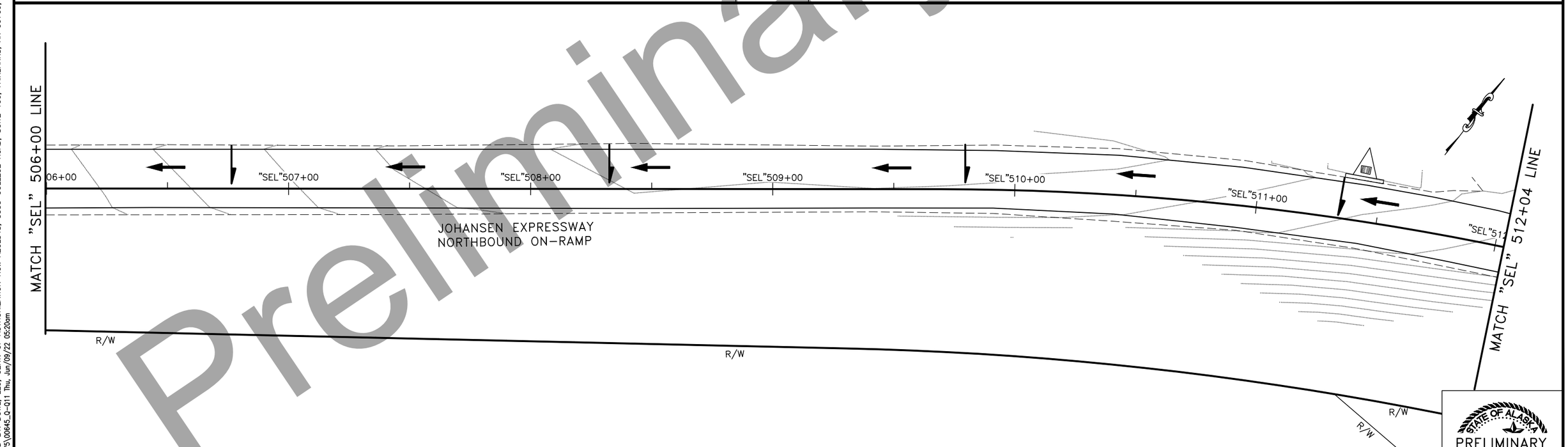
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
LICENSED FOR PROFESSIONAL ENGINEERS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-Q10 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	Q11	Q11





EROSION & SEDIMENT CONTROL PLANS

STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395475\00645_Q-Q11 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	T1	T3

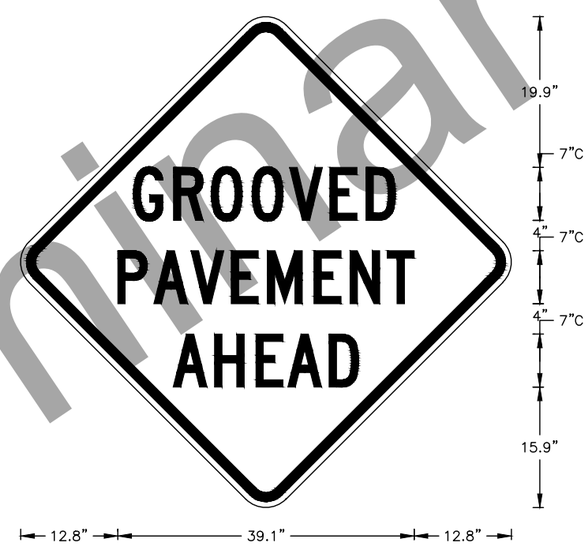
GENERAL TRAFFIC CONTROL NOTES

1. REFERENCE 643 & 652 SPECIFICATIONS FOR ALLOWED CLOSURES, TRAFFIC RESTRICTIONS, AND PEDESTRIAN REQUIREMENTS.
2. THESE TRAFFIC CONTROL PLANS ARE GENERIC IN NATURE. CONTRACTOR TO PROVIDE DETAILED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL.
3. MACS TRANSIT BUS LINE ROUTES THROUGH THE PROJECT LIMITS. BUS ARRIVE AND DEPART SCHEDULE: MON THROUGH FRI 7:00 AM – 9:10 PM; SAT 9:15 AM – 6:40 PM.
4. TEMPORARY PEDESTRIAN PATHWAYS SHALL BE PROVIDED TO ALL BUS STOPS AND OTHER AREAS AND SHALL BE A MINIMUM OF 5 FEET WIDE, EXCEPT AS DIRECTED. PATHS SHALL BE CONSTRUCTED, REMOVED, AND RECONSTRUCTED AS REQUIRED AND SHALL BE TOPPED WITH MINIMUM OF 2.5 INCHES RECYCLED ASPHALT COMPACTED TO 94%. ALL PATHS SHALL BE SEPARATED FROM THE WORK BY A FENCE.
5. EXISTING SIGNS WHICH CONFLICTS WITH CONSTRUCTION SIGNING SHALL BE COVERED DURING PROJECT. COORDINATE REMOVAL WITH CITY OF FAIRBANKS PUBLIC WORKS DEPARTMENT.
6. BUSINESSES WITHIN THE PROJECT LIMITS MAY HAVE DELIVERIES AND GARBAGE PICK–UP DURING NON–BUSINESS HOURS. CONTRACTOR SHALL CONTACT ALL BUSINESSES IN THE PROJECT AND COORDINATE WITH THEM TO ENSURE ACCESS.
7. PARKING LOTS AND DRIVEWAYS ADJACENT TO AN EXCAVATION SHALL BE RAMPED TO PROVIDE ACCESS. DELINEATE WITH CONES.
8. WHEN STREETS AREA RESTRICTED TO 1 LANE, THE MINIMUM CLEAR WIDTH SHALL BE 12 FEET UNLESS DIRECTED BY THE ENGINEER.
9. ACCESS SHALL BE MAINTAINED FOR THE PASSAGE OF EMERGENCY VEHICLES THROUGH THE PROJECT.
10. ACCESS SHALL BE PROVIDED TO COMMERCIAL PROPERTIES DURING THEIR BUSINESS HOURS AND TO RESIDENTIAL PROPERTIES CONTINUOUSLY. CLOSURES SHALL NOT OCCUR WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. MINIMUM 48 HOURS PRIOR TO IMPLEMENTATION OF APPROVED CLOSURE.
11. ALTERNATE ACCESS MAY BE USED AS PART OF APPROVED TRAFFIC CONTROL PLAN. ALTERNATE ACCESS ROUTES SHALL BE CLEARLY SIGNED.
12. INSTALL SAFETY FENCING AROUND ALL OPEN EXCAVATIONS AT NIGHT.

PROJECT INFORMATION SIGN

PROJECT INFORMATION NOTES:

1. SIGN FONT: SERIES 2000
2. PROVIDE 4 EACH ON 4"x4" POSTS AS PERMANENT CONSTRUCTION SIGNS AT LOCATIONS DETERMINED BY THE ENGINEER.



GROOVED PAVEMENT SIGN

GROOVED PAVEMENT NOTES:

1. BORDER DIMENSIONS: R=3", TH=1.25", IN=0.75"
2. PROVIDE 4 EACH ON WINDMASTER STANDS AS MOVEABLE CONSTRUCTION SIGNS AT LOCATIONS DETERMINED BY THE ENGINEER.

TRAFFIC CONTROL NOTES & SIGNS

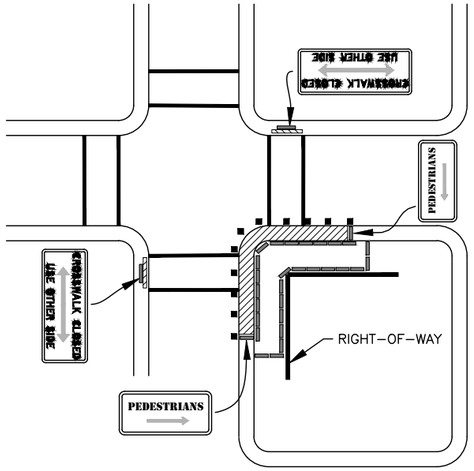
STATE OF ALASKA
PRELIMINARY
PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

Preliminary Plans

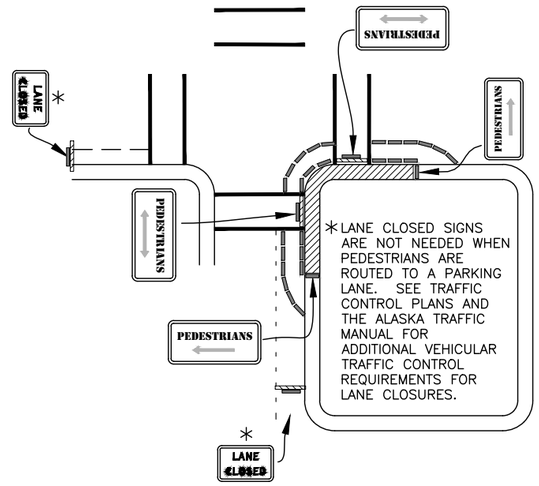
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_T-T1 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

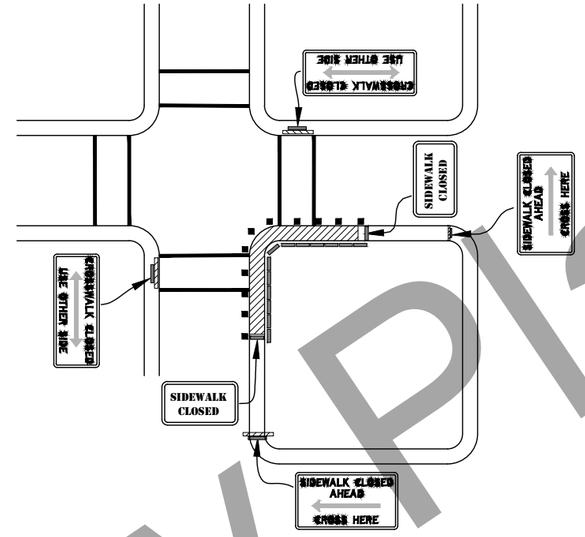
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	T2	T3



A. DETOUR AWAY FROM ROAD



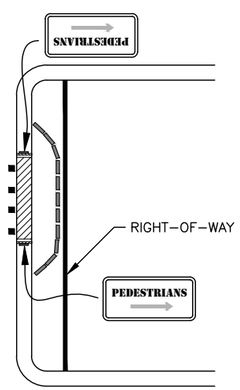
B. DETOUR TO CLOSED PARKING OR TRAVEL LANE



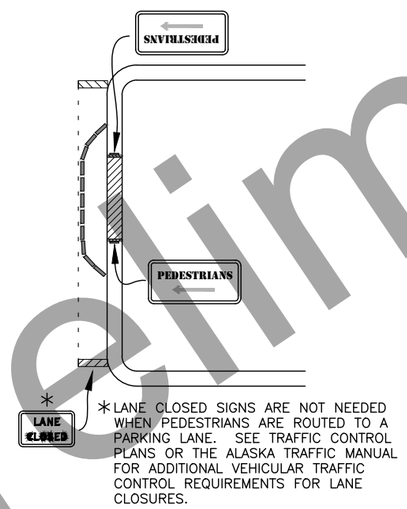
C. DETOUR TO OTHER SIDE

INTERSECTION SIDEWALK, PATHWAY OR SHOULDER CLOSURE

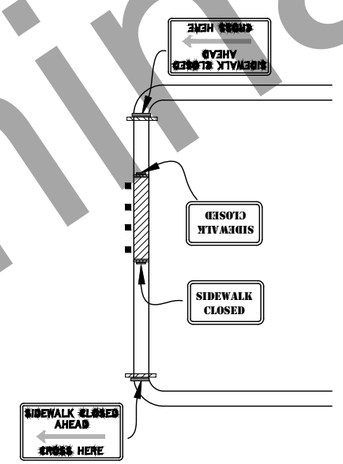
A TO C IN ORDER OF PREFERENCE



D. DETOUR AWAY FROM ROAD



E. DETOUR TO CLOSED PARKING OR TRAVEL LANE



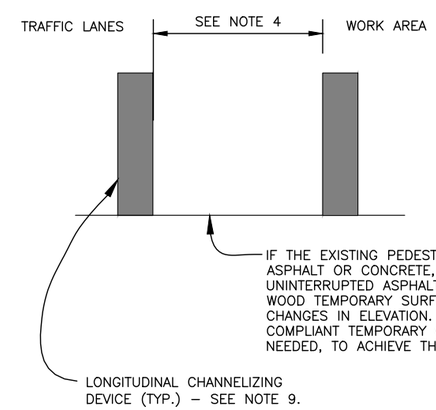
F. DETOUR TO OTHER SIDE

MID-BLOCK SIDEWALK, PATHWAY OR SHOULDER CLOSURE

D TO F IN ORDER OF PREFERENCE

NOTES:

1. THIS SHEET FOCUSES ON TRAFFIC CONTROL DEVICES FOR PEDESTRIANS. LOOK ELSEWHERE FOR VEHICULAR TRAFFIC CONTROL REQUIREMENTS.
2. PROVIDE PEDESTRIAN TRAFFIC CONTROL DEVICES WHEN SIDEWALKS OR PATHWAYS ARE CLOSED TO PEDESTRIANS AND WHERE REQUIRED BY THE PLANS OR SPECIFICATIONS. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
3. AVOID ROUTING PEDESTRIANS ACROSS ROADS UNNECESSARILY. USE DETAIL C OR F ONLY WHEN IT IS NOT PRACTICAL TO USE DETAIL A, B, D, OR E.
4. THE WIDTH OF THE EXISTING PEDESTRIAN FACILITY SHOULD BE PROVIDED FOR THE TEMPORARY FACILITY IF PRACTICAL. TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS AND FEATURES SHOULD NOT INTRUDE INTO THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY, OR OTHER PEDESTRIAN FACILITY. WHEN IT IS NOT POSSIBLE TO MAINTAIN A MINIMUM WIDTH OF 60 INCHES THROUGHOUT THE ENTIRE LENGTH OF THE PEDESTRIAN PATHWAY, A 60 X 60-INCH PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET TO ALLOW INDIVIDUALS IN WHEELCHAIRS TO PASS.
5. WHERE THE POSTED SPEED LIMIT EXCEEDS 45 MPH, SEPARATE PEDESTRIANS FROM ROADWAY EDGE OF PAVEMENT OR FACE OF CURB BY AT LEAST 5'. WHERE THAT IS NOT FEASIBLE, INSTALL PORTABLE CONCRETE BARRIER BETWEEN PEDESTRIANS AND THE ROAD.
6. WHEN PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY THE CURRENT TRAFFIC CONTROL PLAN ARE NOT IN PLACE OR ARE TEMPORARILY REMOVED, PROVIDE A WORKER TO DIRECT PEDESTRIANS THROUGH THE WORK AREA.
7. COVER PEDESTRIAN TRAFFIC SIGNAL DISPLAYS CONTROLLING CLOSED CROSSWALKS.
8. WHEN USING DETAILS C AND F, ROUTE PEDESTRIANS TO THE BEST CROSSING POINT NEAR THE WORK AREA.
9. WHEN CHANNELIZATION IS USED TO DELINEATE A PEDESTRIAN PATHWAY, A CONTINUOUS DETECTABLE EDGING SHOULD BE PROVIDED THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT PEDESTRIANS USING A LONG CANE CAN FOLLOW IT. THESE DETECTABLE EDGINGS SHOULD COMPLY WITH THE PROVISIONS OF THE MUTCD.
10. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN 7 FEET ABOVE THE TEMPORARY PEDESTRIAN PATHWAY SHOULD NOT PROJECT MORE THAN 4 INCHES INTO ACCESSIBLE PEDESTRIAN FACILITIES.
11. INSTALL PEDESTRIAN SIGNS ON AN ADA COMPLIANT (DETECTABLE) TYPE III BARRICADE.



PEDESTRIAN DETOUR – TYPICAL SECTION

LEGEND:

- LONGITUDINAL CHANNELIZING DEVICE
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- TYPE III BARRICADE WITH SIGN
- WORK AREA

PEDESTRIAN TRAFFIC CONTROL

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

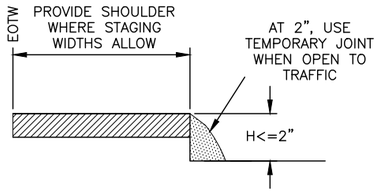
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_T-T2 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	T3	T3

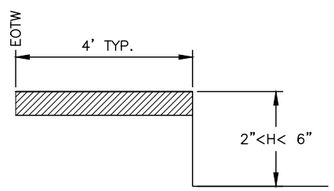
VERTICAL DROP-OFFS



CASE A

DROP-OFFS ≤2 INCHES
(PAVED SURFACES ONLY)

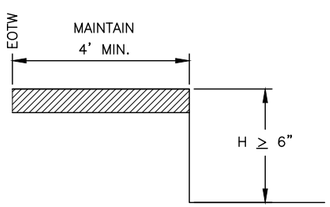
1. USE "UNEVEN LANES" (W8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES
2. LEAVE NO DROP-OFFS > 1.5" IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK



CASE B

2"< DROP-OFFS < 6"
(ALL ROADWAY SURFACES)

1. PLACE CONES OR CANDLES FOR DROP-OFFS ≥ 4 FEET AND ≤ 30 FEET FROM EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS < 4 FEET FROM THE EOTW.

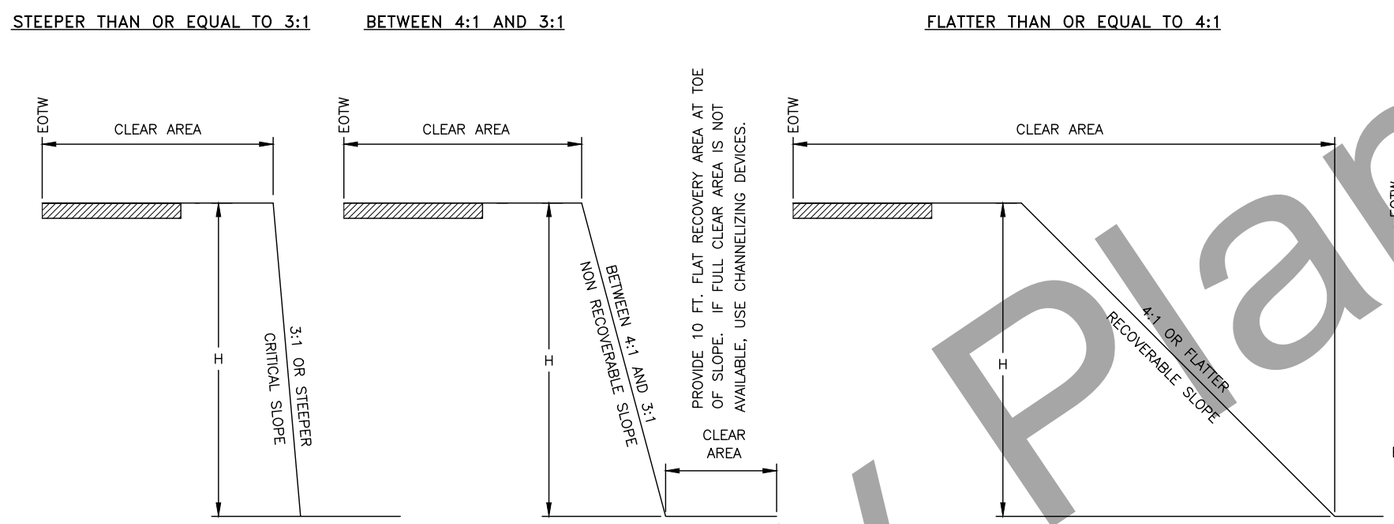


CASE C

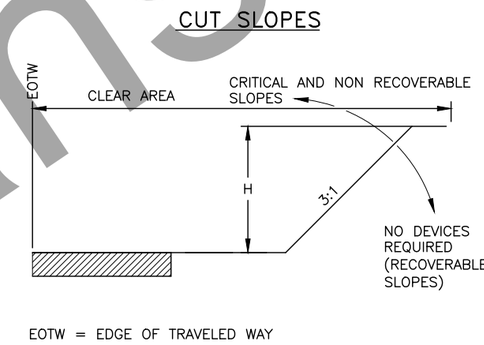
DROP-OFFS ≥6"
(ALL ROADWAY SURFACES AND ROADSIDE SLOPES)

1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS ≤ 24" WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIERS FOR DROP-OFFS > 24" WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

FILL SLOPES



CUT SLOPES



EOTW = EDGE OF TRAVELED WAY

CLEAR AREA REQUIREMENTS

	LOW SPEED < = 35 MPH	INTERMEDIATE SPEED 40 MPH TO 45 MPH	HIGH SPEED ≥ = 50 MPH
RURAL	15'	24'	30'
URBAN	10' DITCH SECTIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB

CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES 3:1 OR STEEPER WITHIN THE CLEAR AREA

	H <= 15'	H > 15'
< 2000 VPD LOW VOLUME	CANDLES OR CONES	TYPE II BARRICADES OR DRUMS
> 2000 VPD	TYPE II BARRICADE OR DRUMS	PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL

EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPARATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

Preliminary Plans

TRAFFIC CONTROL DEVICES

STATE OF ALASKA
PRELIMINARY PS&E
CE-11237
REGISTERED PROFESSIONAL ENGINEER

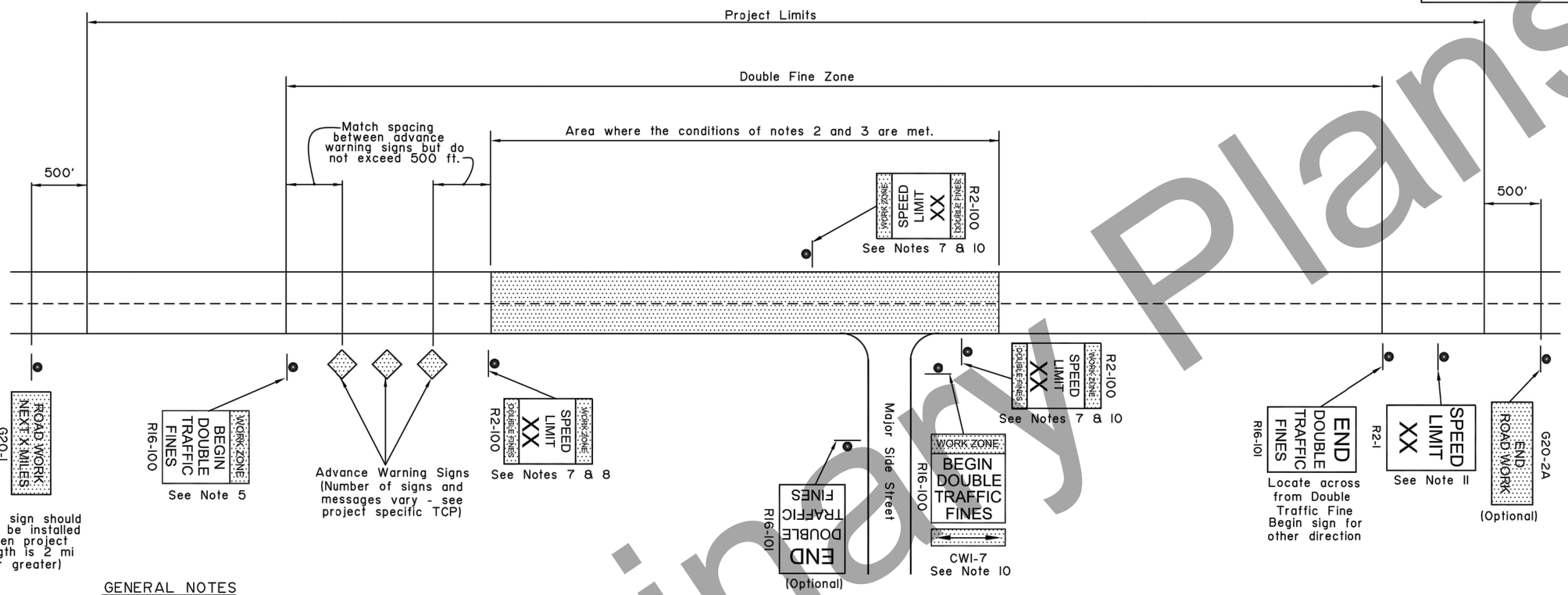
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_T-T3 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V1	V15

C-04.12

SHEET | of |



GENERAL NOTES

1. Signs are shown for one direction only (with one exception). Signs for the other direction mirror those shown.

2. Double fine signs shall be used only where one or more of the following conditions exist:
   a. Active work areas (where road workers and/or machines are presently working on or adjacent to a road)
   b. Detours on new temporary roads built for that purpose (this does not include detours on existing streets)
   c. Sections of paved roads where pavement has been removed.
   d. Roads being paved where unmatched asphalt lifts result in a vertical lip between lanes.

3. Double fine signs shall be confined to the areas where the above conditions exist, with the following exceptions:
   a. If the project is 2 miles or shorter in length, the entire project may be posted for double fines when the above conditions exist on any part of the project.
   b. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and the intervening segments may be posted as a single double fine zone.

4. Double fine signs shall be removed or covered when work activity ceases for more than two days and conditions b, c, or d of note 2 are not met.

5. The R16-100 "BEGIN" sign may be used in place of the first advance warning sign. However, when this is done, the appropriate advance warning sign must be reinstalled when the double fine sign is taken down or covered.

6. When a double fine zone is longer than 2 miles, work zone speed limit signs shall be posted at spacings not greater than 2 miles within the double fine zone.

7. "Work zone speed limit signs", as used here, refer either to 1) R2-100 signs or 2) standard R2-1 regulatory speed limit signs with CW20-102 "DOUBLE FINES" plates mounted below.

8. The limit shown on work zone speed limit signs shall be either the existing limit before construction or, if a work zone speed limit order has been approved in accordance with ADOT&PF Procedure 05.05.020 PDR, a reduced limit.

9. All existing regulatory speed limit signs within double fine zones shall either be replaced with R2-100 signs or supplemented with CW20-102 plates.

10. Signs shall be installed at major intersections within the double fine zone to warn entering drivers of double fines. This may be done with a R16-100 sign with a CWI-7 arrow panel on the side street or with two work zone speed limit signs on the main street on either side of the intersection. Use of R16-100 signs on side streets eliminates the need for "Road Work Ahead" signs on those streets. If the speed limit has been reduced, the two work zone speed limit signs are mandatory.

11. At the end of each double fine zone, install an R2-1 sign showing the speed limit for the road beyond the double fine zone.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LOCATION OF DOUBLE TRAFFIC FINE SIGNS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

ALASKA STANDARD PLANS

Preliminary Plans

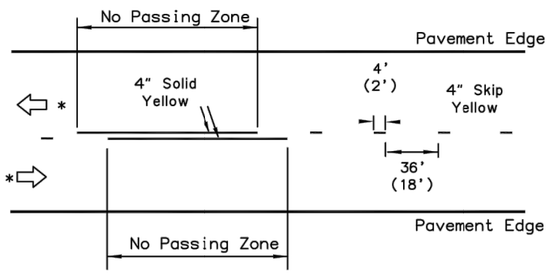
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V1 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

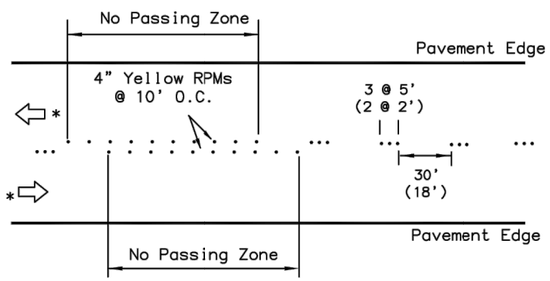
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V2	V15

C-05.20

SHEET | of |



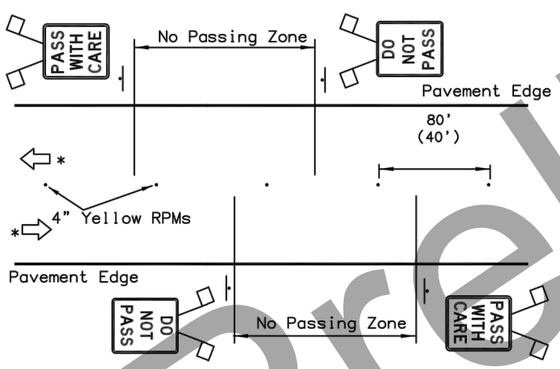
Striping



Temporary Raised Pavement Markers

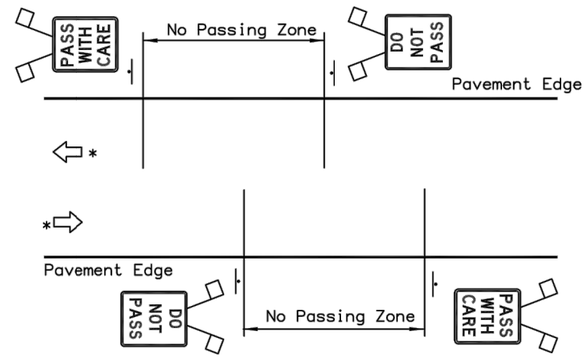
DETAIL A

Two-lane road: No Passing Zones indicated with pavement markings.



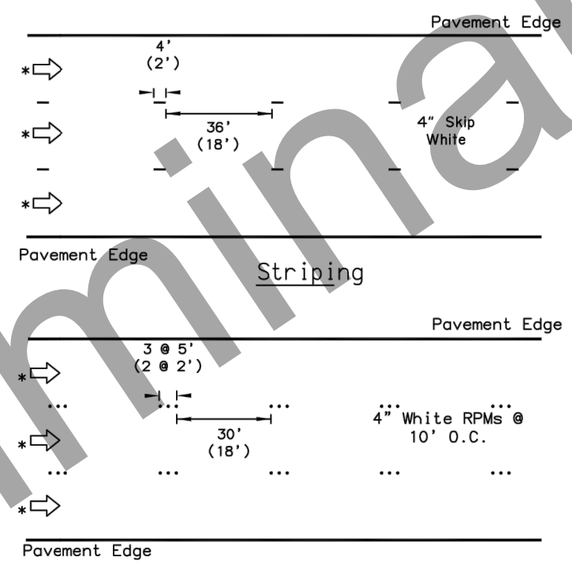
DETAIL B

Two-lane road: No Passing Zones indicated by signs only. Raised pavement markers for centerline delineation.



DETAIL C

Two-lane road: No Passing Zones indicated by signs only (see Note 2c). No centerline delineation.



Temporary Raised Pavement Markers

DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

GENERAL NOTES:

1. Final pavement markings conforming to Part 3 of the Alaska Traffic Manual should be installed before paved roads are open to public travel. If that is not practical, install interim pavement markings as shown on this drawing. Maintain interim pavement markings until final pavement markings are installed.

2. No interim pavement markings are required:
   a. on projects that will not have permanent markings when finished.
   b. in work zones that are open to public travel for no more than one work shift during daytime or for no more than one hour at night.
   c. where DO NOT PASS and PASS WITH CARE signs are installed on two lane roads as shown in Detail C, no pavement markings are required:
      1) for 3 days if seasonal ADT is above 2000, or
      2) for 1 month if seasonal ADT is below 2000.

3. Interim pavement markings should not be in place longer than 14 calendar days before being replaced with permanent markings conforming to Part 3 of the Alaska Traffic Manual unless the Engineer provides written approval.

4. Where R4-1 DO NOT PASS signs are used, install at the beginning of no passing zones and at no more than 1500' spacings within no passing zones.

5. Install high level warning devices on all DO NOT PASS and PASS WITH CARE signs.

6. Offset temporary markings 8"-12" from the future location of permanent markings if applied on the same lift of pavement.

7. Dimensions in parenthesis apply to curves with a radius of 1000 feet or less or where posted speed limit is 30 mph or less.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

INTERIM PAVEMENT MARKINGS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

ALASKA STANDARD PLANS

Preliminary Plans

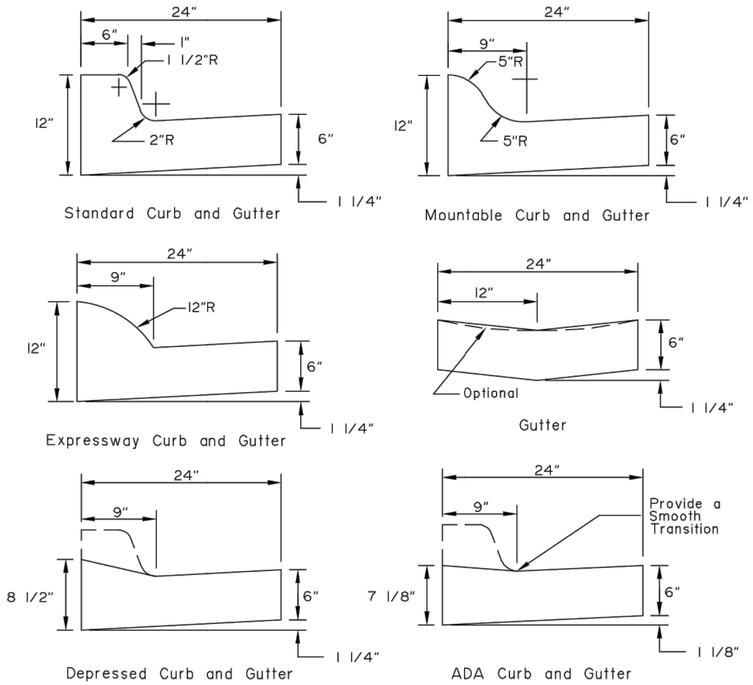
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V2 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

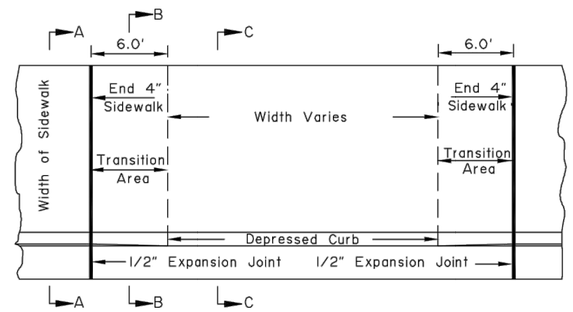
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V3	V15

I-20.20

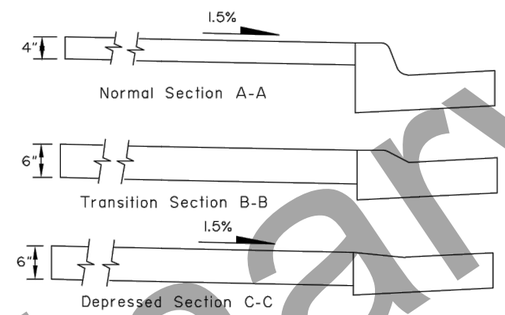
SHEET 1 of 1



CURB and GUTTER DETAILS

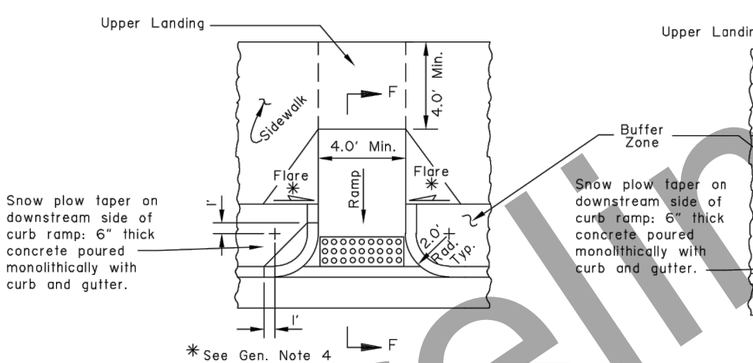


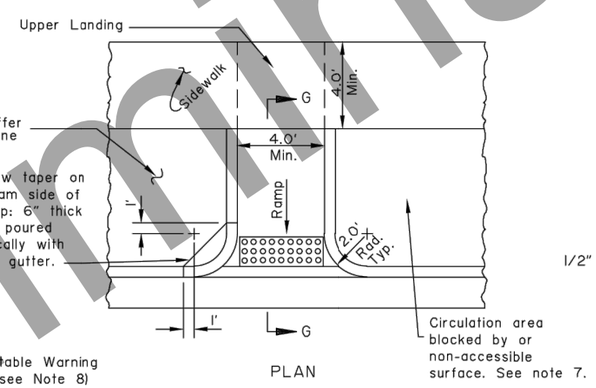
DRIVEWAY CURB CUT DETAILS



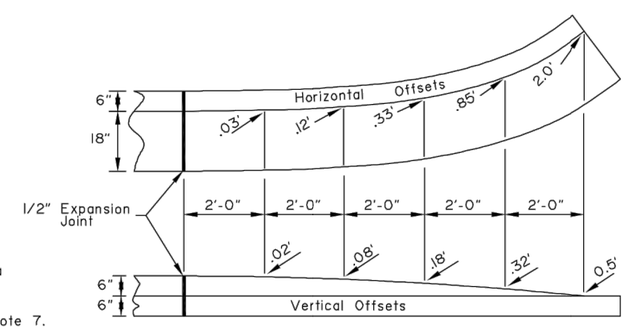
CONSTRUCTION NOTES:

1. Use the type of curb and gutter shown on the plans.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. Construct ramp slopes at a 7.7% nominal grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
4. Construct flare slopes at 8.3% (measured parallel to the curb line) or flatter, sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max), and ADA Curb and Gutter gutter pan slopes at 4.7% nominal. Construct grade breaks perpendicular to ramp runs.
5. Do not construct flare slopes steeper than 10.0%, sidewalk cross slopes steeper than 2.0% and ADA Curb and Gutter gutter pan slopes steeper than 5.0%. These are the steepest slopes allowed under the 2006 ADA Standards for Transportation Facilities.
6. Provide a coarse broomed finish on ramp runs perpendicular to the ramp slope.
7. When approved by the Engineer, curb returns may be replaced with flares at locations where access to the side of a ramp run is free of poles, utility boxes, other obstructions, or non-accessible surfaces such as a dirt planter strips. See Standard Plan I-22 for flare details.
8. Install 24" wide detectable warning tiles for the full width of the ramp. Provide tiles with truncated domes meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities. Align truncated dome pattern in the predominant direction of wheelchair travel to permit wheels to roll between domes.
9. Maximum cross slope on upper landings, measured in any direction, is 2.0%. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.

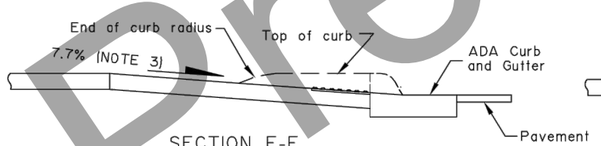




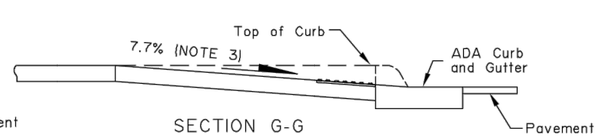
= Detectable Warning Tile (see Note 8)



CURB and GUTTER TERMINATION TRANSITIONS



SECTION F-F
Returned Curb Ramp with Sidewalk for Pedestrians



SECTION G-G
Returned Curb Ramp for Pedestrians

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CURB CUT CURB & GUTTER AND CURB RAMP DETAILS

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

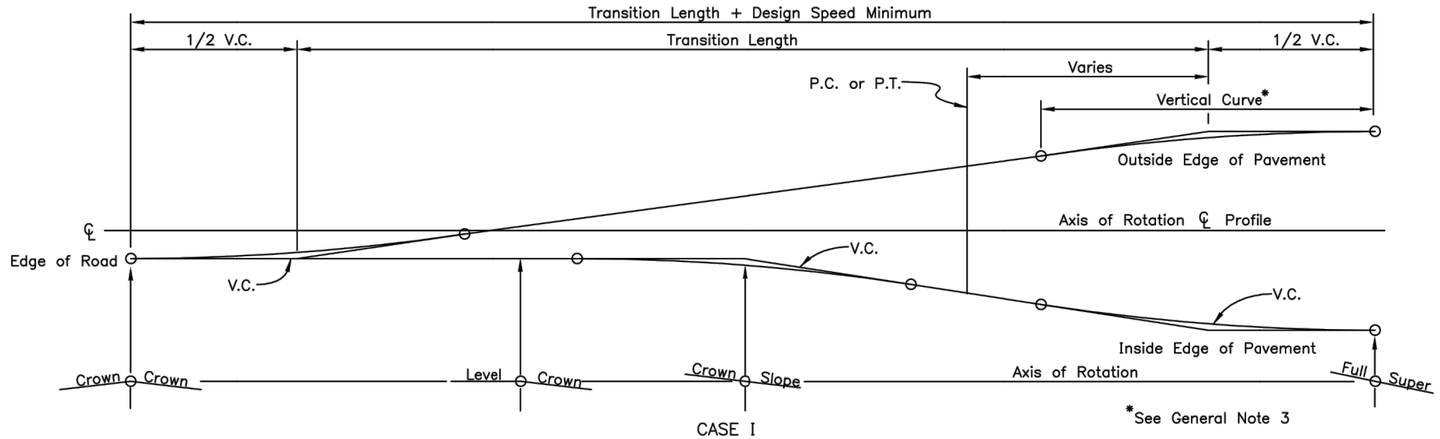
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V3 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

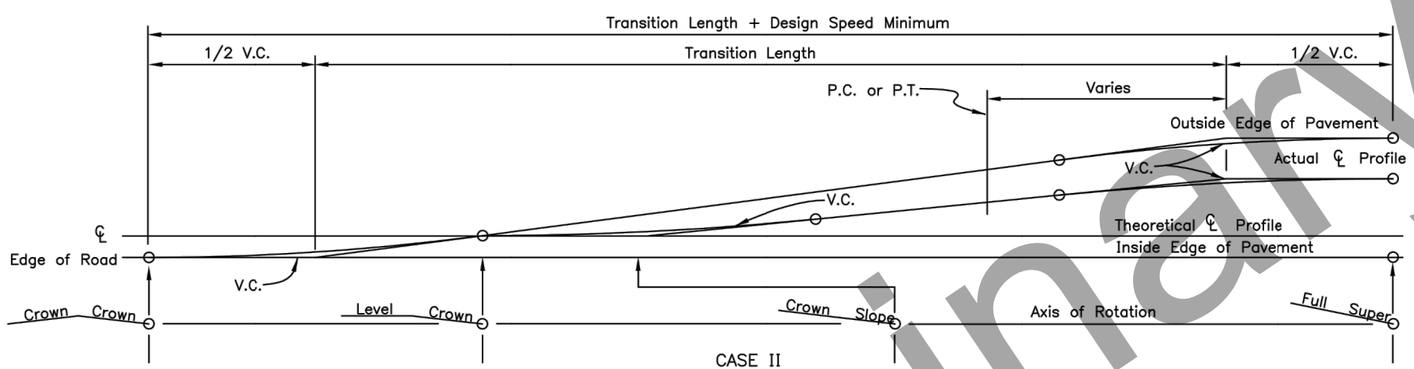
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V4	V15

I-81.00

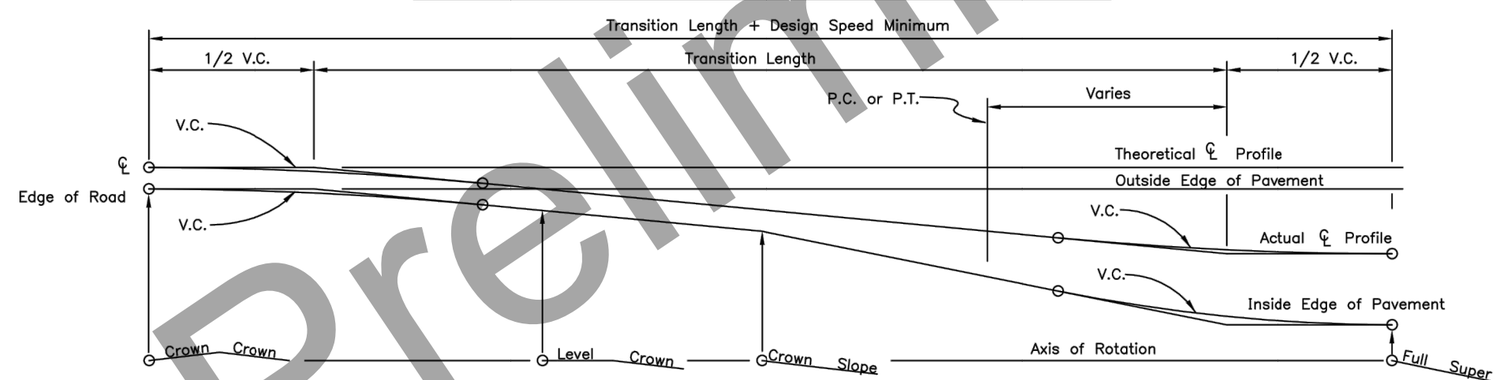
SHEET 1 of 1



CASE I
PAVEMENT REVOLVED ABOUT CENTERLINE



CASE II
PAVEMENT REVOLVED ABOUT INSIDE EDGE
TO BE USED WHERE DRAINAGE IS THE GOVERNING CONSIDERATION



CASE III
PAVEMENT REVOLVED ABOUT OUTSIDE EDGE TO BE
USED WHERE OVERALL APPEARANCE IS THE MAIN CONTROL

GENERAL NOTES:

1. Location of transition length relative to horizontal curves will be shown on the plans or as directed by the Engineer.
2. Widening for guardrail or curvature will not change the location of the axis of rotation.
3. Minimum vertical curve length in feet shall be the numerical value of the design speed in M.P.H.
4. Superelevation shall be built into the subgrade and carried through the shoulders.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SUPERELEVATION TRANSITION

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

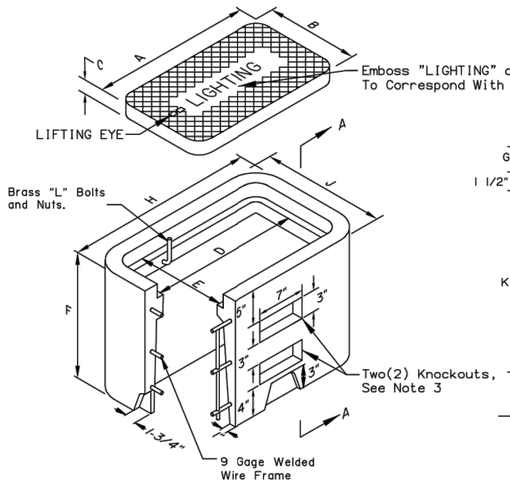
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V4 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

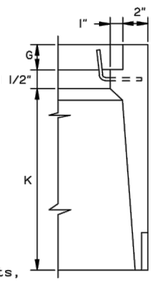
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V5	V15

L-23.02

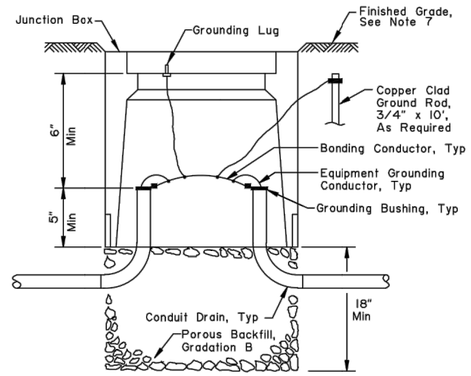
SHEET 1 of 1



ISOMETRIC

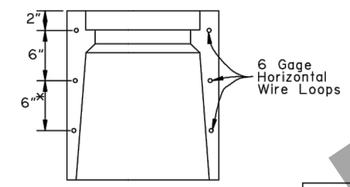


SECTION A-A



ELEVATION

TYPE I & IA JUNCTION BOX

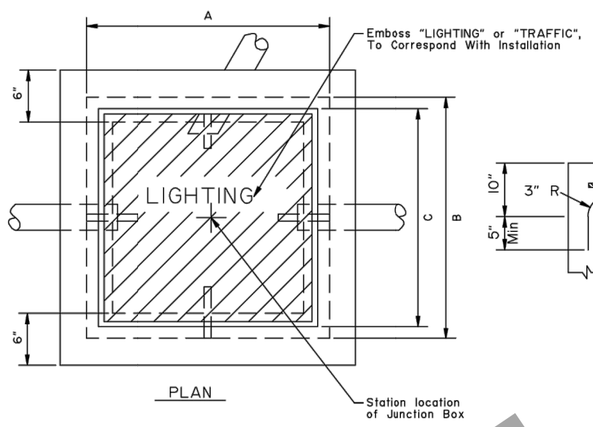


ALTERNATE REINFORCING

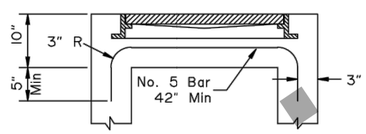
*Type IA Only

	DIMENSIONS (IN)	
	TYPE I	TYPE IA
A	15	22 3/4
B	10	13 1/4
C	1 3/4	2
D	13 1/2	21 1/4
E	8 1/2	11 3/4
F	12	18
G	1 3/4	2
H	19 1/2	27 1/4
J	14 1/2	17 3/4
K	8 3/4	14 1/2

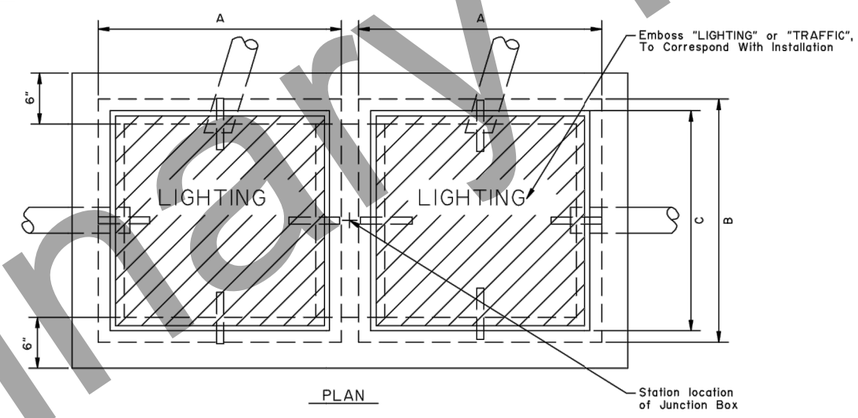
	DIMENSIONS (IN)		
	TYPE II	TYPE III	TYPE IV
A (Max)	30	30	30
B (Max)	30	30	36
C (Min)	22	22	30
D (Min)	22	22	24
E (Min)	24	24	30



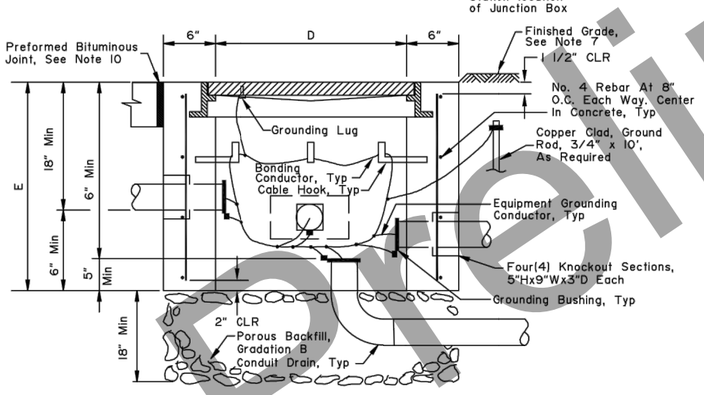
PLAN



SECTION B-B

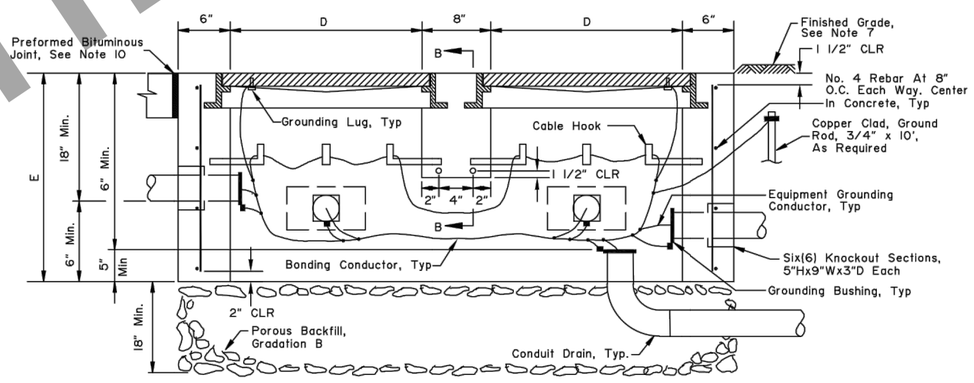


PLAN



ELEVATION

TYPE II JUNCTION BOX



ELEVATION

TYPE III & IV JUNCTION BOX

GENERAL NOTES:

1. See Alaska DOT&PF Standard Specifications for Highway Construction and Standard Plan Development Report (SPDR) for additional requirements.
2. Construct junction boxes using grade 60 reinforcing steel conforming to ASTM A615 and Class A concrete conforming to section 501 of the specifications.
3. Provide knockouts indicated in Type IA junction box when installed for loop detection. Conduit for loop detectors to enter junction box through knockouts.
4. Covers for junction boxes shall be cast iron. Type I & IA shall be secured to junction box with a minimum of two bolts and be rated ANSI/SCTE 77, Tier 8, minimum. Type II, Type III & Type IV cover shall weigh over 100 pounds and be ANSI/SCTE77, AASHTO H-20 traffic rated.
5. The minimum required bearing capacity for Type I shall be 6,800psf, for Type IA shall be 5,100psf, for Type II shall be 3,500psf, for Type III shall be 2,300psf, and for Type IV shall be 2,000psf.
6. See section 703-2.10 of the specifications for stone drain material requirements.
7. See section 660-3.04 of the specifications for top of junction box placement to finished grade requirements.
8. Provide conduits as required, size and quantity indicated in plans.
9. Provide grout around conduits in knockouts and for unused knockouts.
10. Provide a 1/2" thick preformed bituminous joint material around junction boxes installed in concrete walkways.
11. Metal conduits and junction box covers shall be bonded together to be electrically continuous using No. 8 AWG minimum copper bonding conductor. Cover shall be bonded using a tinned copper braided bonding jumper.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

JUNCTION BOXES FOR ELECTROLIER & TRAFFIC SIGNALS

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: CNH Date: 7/15/2020
Next Code and Standards Review date: 7/15/2030

ALASKA STANDARD PLANS

Preliminary Plans

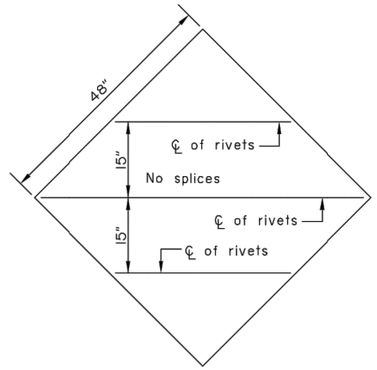
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V5 Thu, Jun/09/22 05:20am

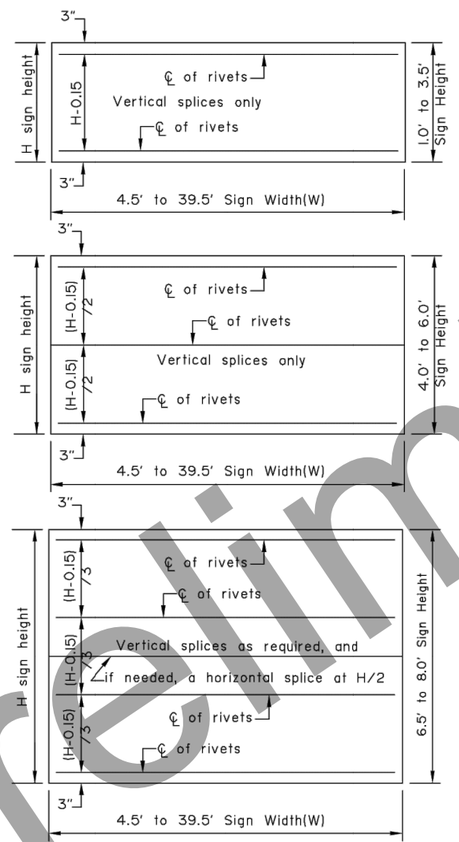
NO.	DATE	REVISION

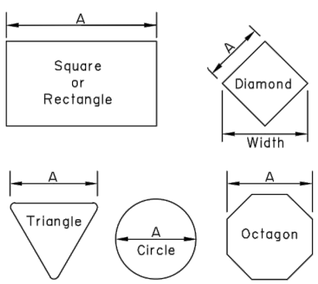
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V6	V15

S-00.12

SHEET 1 of 1





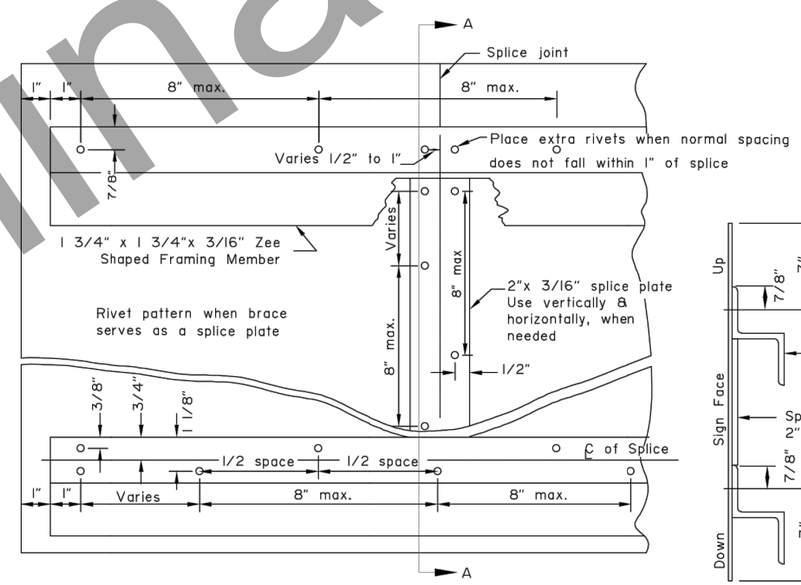


Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

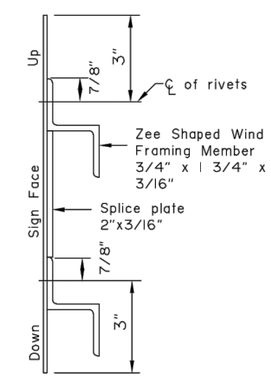
Install wind framing on all signs that exceed the dimensions listed.

LIGHT SIGNS

WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

GENERAL NOTES

1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located (H-0.15)/4 spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

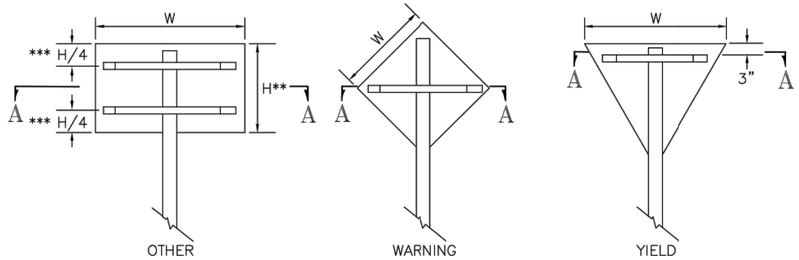
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V6 Thu, Jun/09/22 05:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V7	V15

S-01.02

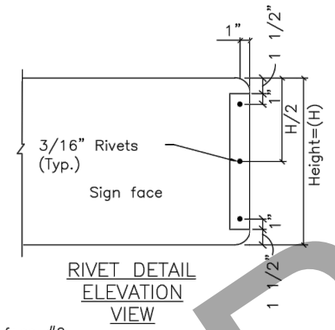
SHEET | of |



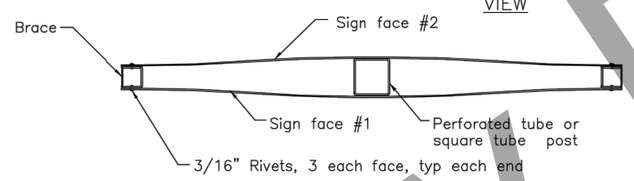
*** Use one brace when H ≤ 18"
Use two braces when 18"< H < 48"
Use three braces when H ≥ 48"

** Position of brace may be varied to match Predrilled mounting holes in panel

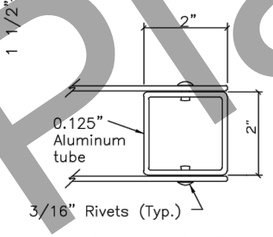
SIGN BRACING PLACEMENT



RIVET DETAIL ELEVATION VIEW

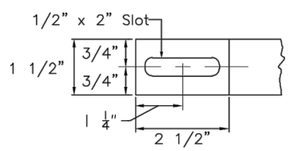


PLAN VIEW

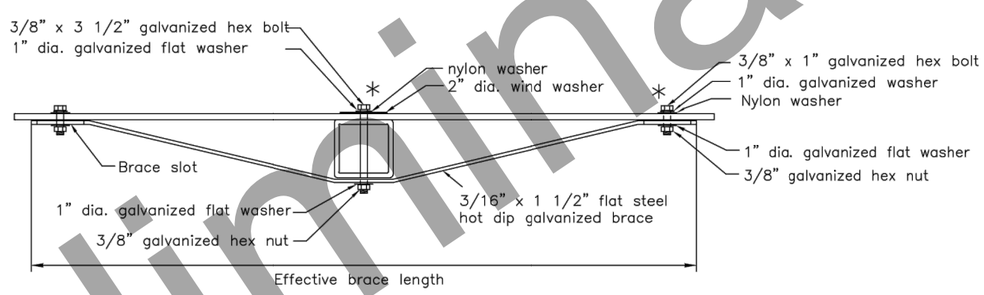


END BRACE DETAIL

SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING SECTION A–A
Plan view

* Adjust location of bracing so that bolts and washers will miss the sign legend

Sign Width(W)	Effective Brace Length		
	Warning	Yield	Other
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	–	36"
48"	Two posts	36"	42"

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

BRACING FOR SIGNS MOUNTED ON SINGLE POST

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

ALASKA STANDARD PLANS

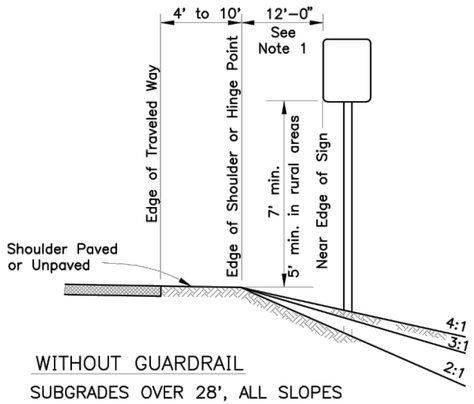
Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V7 Thu, Jun/09/22 05:21am

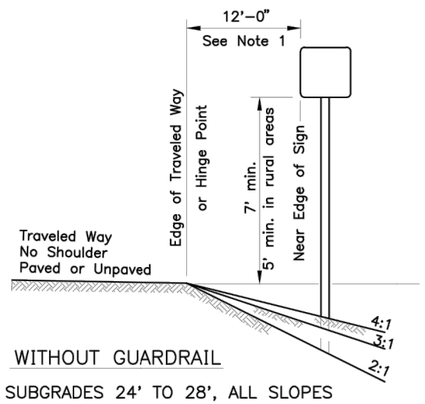
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V8	V15

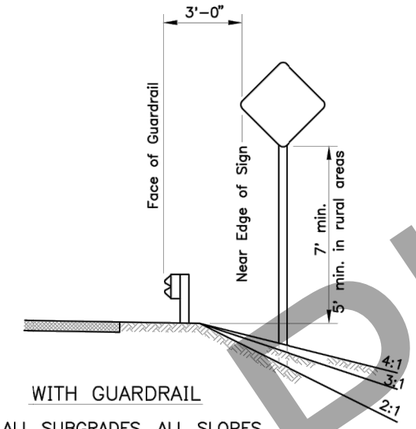
S-05.02 SHEET 1 of 1



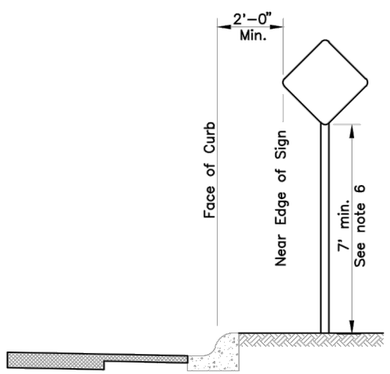
WITHOUT GUARDRAIL
SUBGRADES OVER 28', ALL SLOPES



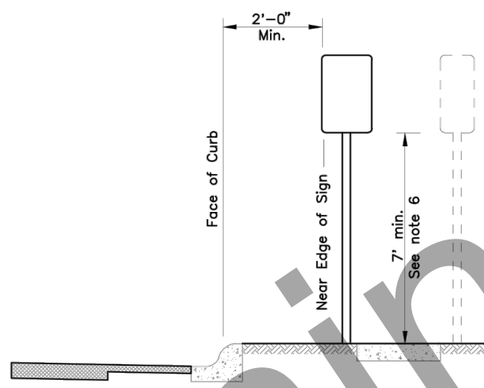
WITHOUT GUARDRAIL
SUBGRADES 24' TO 28', ALL SLOPES



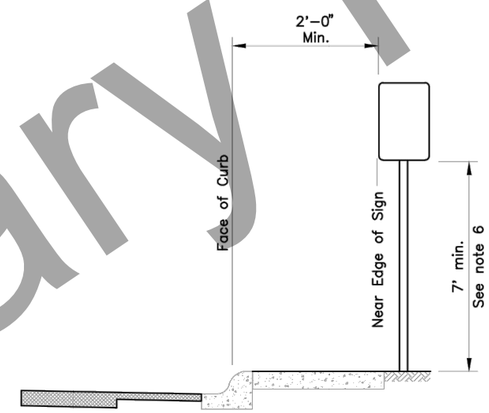
WITH GUARDRAIL
ALL SUBGRADES, ALL SLOPES



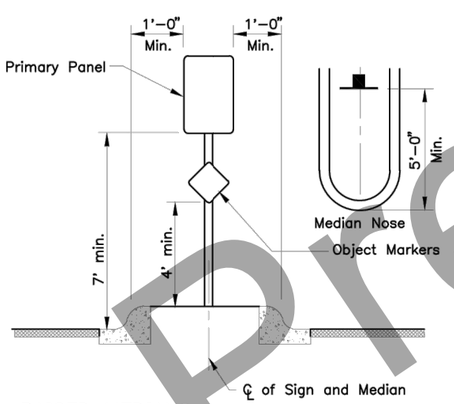
CURB WITHOUT SIDEWALK



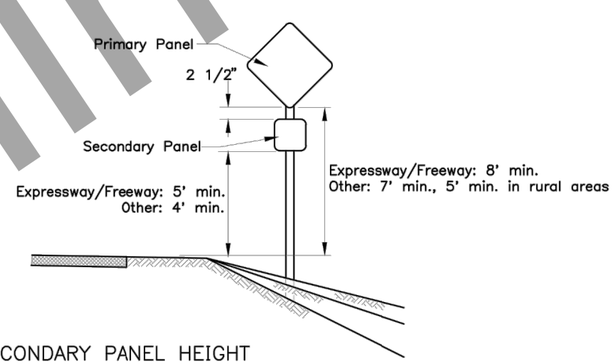
CURB WITH PARKWAY AND SIDEWALK
(If R/W width permits, signs should be placed behind sidewalk.)



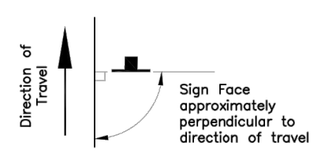
CURB WITH SIDEWALK WITHOUT PARKWAY



RAISED MEDIANS
Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT
ALL TWO PANEL MOUNTING



SIGN POSITIONING

GENERAL NOTES

1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
5. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.
6. Minimum mounting height is 7'-0" where parking or pedestrian movements are likely to occur, or where sings extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\D0645_V-V8 Thu, Jun/09/22 05:21am

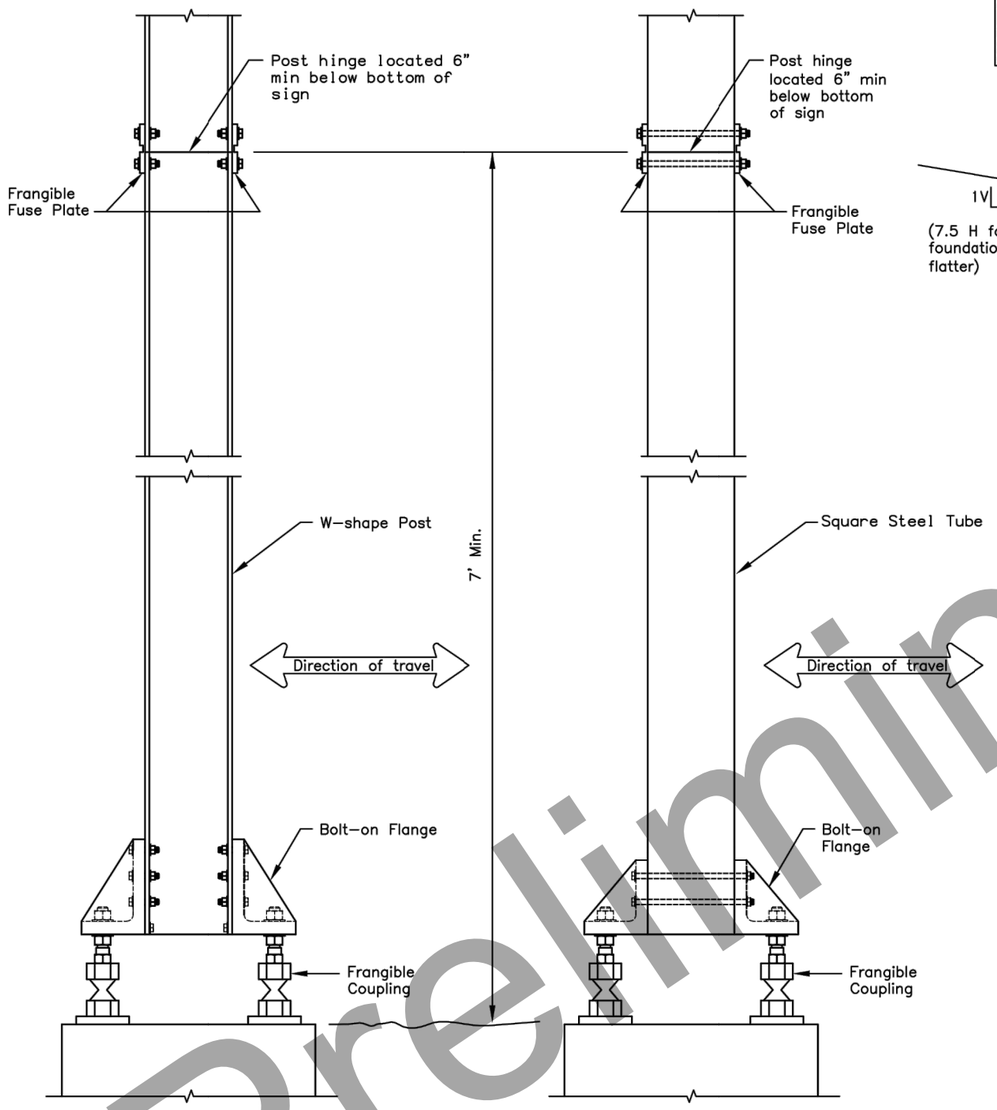
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V9	V15

S-31.02

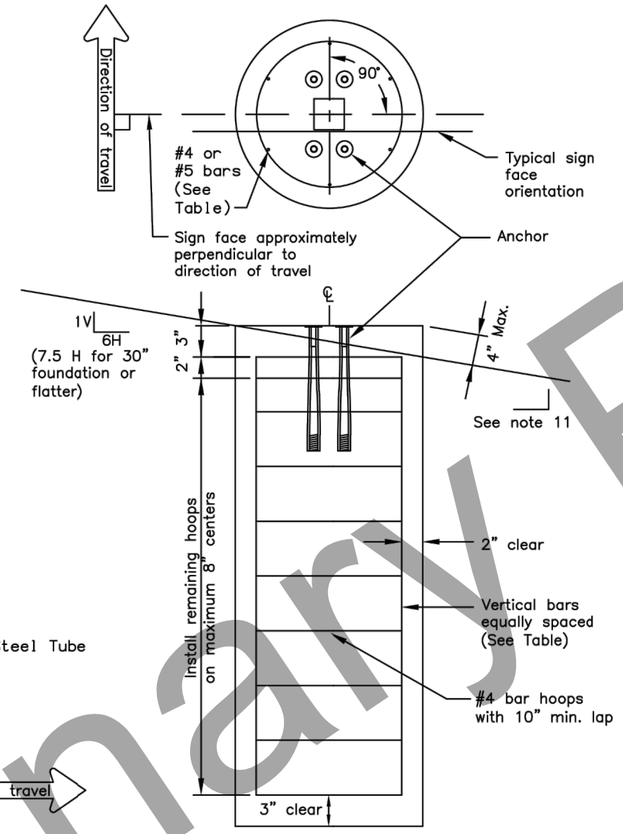
SHEET 1 of 1

NOTE:
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



FRANGIBLE COUPLING SYSTEM FOR W-SHAPE POST

FRANGIBLE COUPLING SYSTEM FOR SQUARE STEEL TUBES



SIGN POST FOUNDATION
See Table for depth and diameter

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT					
	DIA.	MIN. DEPTH	CY^3 CONC.	VERTICAL BARS QTY.	VERTICAL BARS SIZE	VERTICAL BARS LGTH.	HOOPS QTY.	HOOPS SIZE	HOOPS DIA.
2 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4	1'-2"
3" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4	1'-2"
3 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4	1'-2"
4" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4	2'-2"
4 1/2" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4	2'-2"
5" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4	2'-2"
W6 x 9	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4	2'-2"
W6 x 12	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4	2'-2"
W6 x 15	3'-0"	6'-6"	1.70	8	#11	6'-0"	12	#4	2'-8"
W6 x 30	3'-0"	7'-6"	1.96	8	#11	7'-0"	13	#4	2'-8"

FOUNDATION TABLE

* Foundations sized for use where there are no loose, high moisture, or fine grained soils.

GENERAL NOTES

1. Furnish sign posts with NCHRP 350 compliant frangible couplings designed to break away safely when struck from any direction. There is no MASH compliant device at this time. See SPDR report for more info.
2. Furnish frangible coupling systems with bolt-on flanges.
3. Details on this sheet illustrate only the general components of a frangible coupling system, and are not intended to specify a particular product.
4. Install frangible fuse plates as specified by the manufacturer and hinged joints when multiple posts are used to support a sign. Do not use round pipes.
5. Install the components of the breakaway system, including hinges, in accordance with the written instructions of the system manufacturer.
6. Use Class A, B or W concrete conforming to Sections 501 or 550 of the Standard Specifications. Furnish ASTM A615 grade 60 steel bars for concrete reinforcement conforming to AASHTO M31.
7. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of #3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
8. Install the concrete anchors using a rigid template. Locate the anchors on centers and within tolerances specified by the manufacturer.
9. Install the anchors in fresh concrete as recommended by the manufacturer. Adjust the template's final position until it is level. Remove and replace all foundations that need more than 2 shims under any 1 coupling or more than a total of 3 shims under any pair of couplings to plumb the post.
10. Drill the holes for attaching brackets before the sign posts are hot dip galvanized. Test fit templates in the holes to ensure the brackets can be installed square to the posts.
11. Special grading detail and/or shielding may be required to maintain 4" maximum clear distance.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK, MJM Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

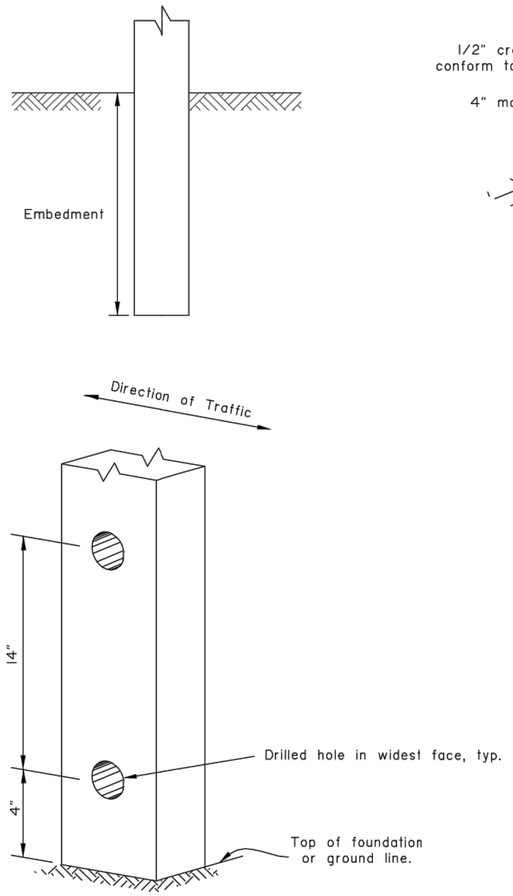
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V9 Thu, Jun/09/22 05:21am

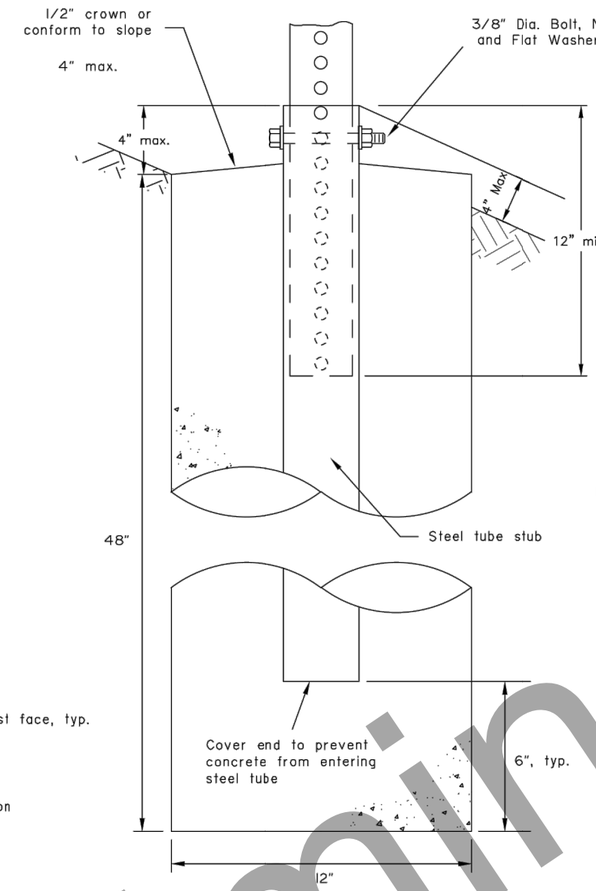
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V10	V15

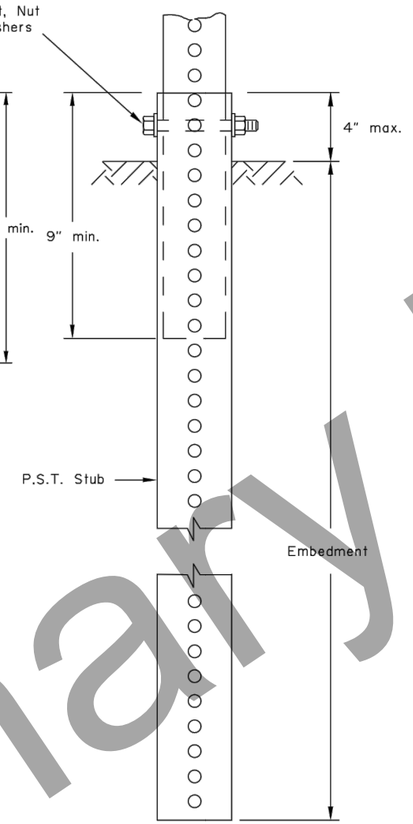
S-30.05

SHEET | of |





SLEEVE TYPE
CONCRETE FOUNDATION



SLEEVE TYPE*
SOIL EMBEDMENT

GENERAL NOTES:

1. Sign shall be placed symmetrically around posts and refer to Standard Plan S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Concrete shall be class B.
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

SIGN POST SPACING NOTES:

1. Install sign support in accordance with the table below, unless otherwise required by plans or specifications.
2. Exceptions:
   a. Use one post for all E5-1 gore signs, regardless of width.
   b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See tables below for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Plan S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.

WOOD SIGN POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NO. OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	4'-1"	2
4"x6"	1 1/2"	5'-3"	2
6"x6"	1 1/2"	4'-9"	1
6"x8"	3"	4'-9"	1

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

PERFORATED STEEL TUBES (P.S.T.)		
POST SIZE	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	4'-8"	2
1 3/4" x 1 3/4"	4'-6"	2
2" x 2"	4'-3"	2
2 1/4" x 2 1/4"	5'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

PERFORATED STEEL TUBE (PST) POSTS

TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W-Shape	
0.5 to 4.0	1	-	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

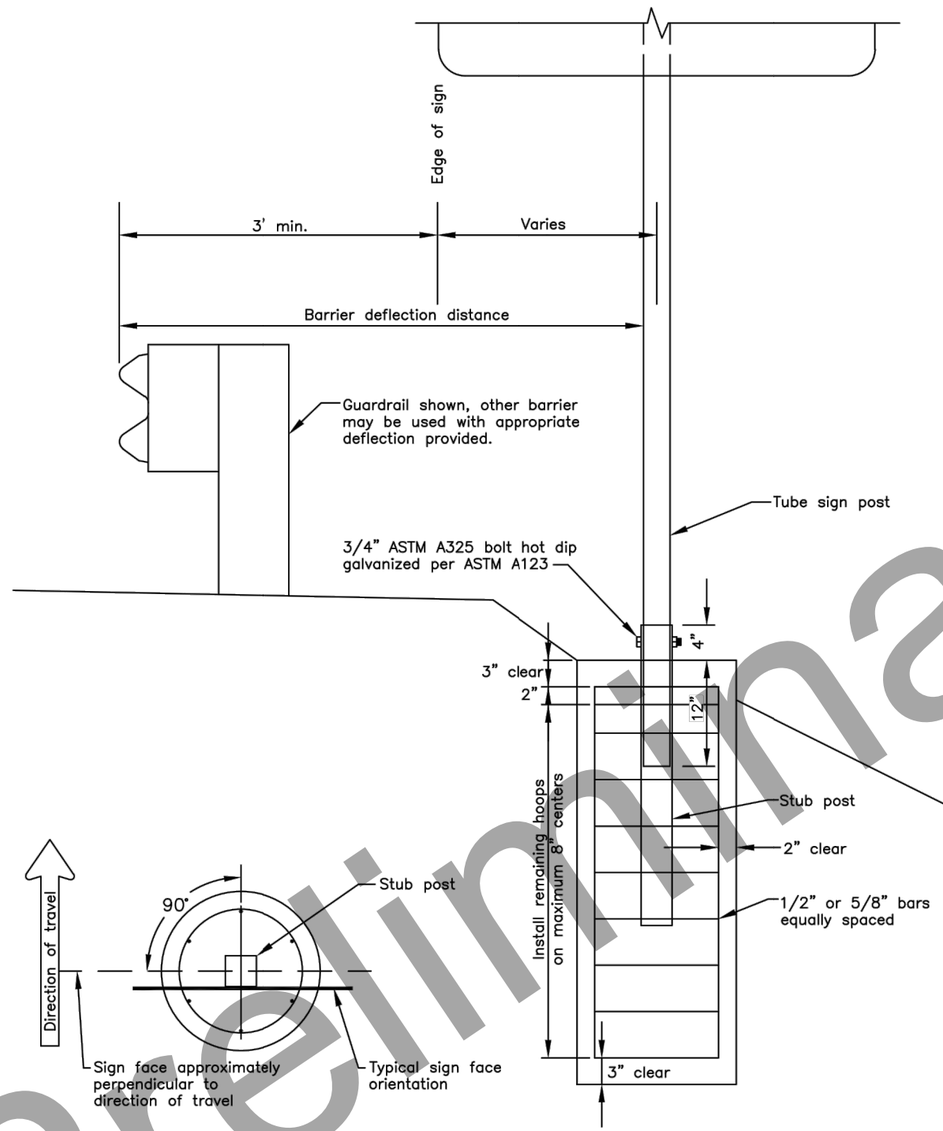
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V10 Thu, Jun/09/22 05:21am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V11	V15

S-32.02

SHEET 1 of 1



SIGN POST FOUNDATION
(Plan view)

SIGN POST FOUNDATION
See table for depth and diameter

GENERAL NOTES

1. This is a non–crashworthy sign support. It may only be used at locations shielded by a guardrail, barrier, or wall. It may not be used if the sign post is within 20' of the rail and is closer than 75' from the guardrail end post (measured along the rail). For this case use a breakaway sign support. See Standard Plan G–20.
2. Furnish steel tube sign post and stub post that conform to ASTM A500, grade B, and meet ASTM A123 for hot dip galvanizing.
3. Install tubes and stub post with a 0.1875" wall thickness.
4. For Perforated Tubes use Standard Plan S–30.
5. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of No. 3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
6. Use Class A, B or W concrete.

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT					STUB POST	
				VERTICAL BARS			HOOPS		SLEEVE	
	DIA.	MIN. DEPTH	C.Y. CONC.	QTY.	SIZE	LGTH.	SIZE	DIA.	SIZE	LGTH.
2 1/2" TUBE	1'–0"	4'–6"	0.13	6	#4	4'–0"	#4	8"	3"	3'
3" TUBE	1'–6"	4'–0"	0.25	7	#5	3'–6"	#4	1'–2"	3 1/2"	3'
3 1/2" TUBE	1'–6"	4'–6"	0.27	7	#5	4'–0"	#4	1'–2"	4"	3'
4" TUBE	2'–6"	4'–0"	0.69	8	#8	3'–6"	#4	2'–2"	4 1/2"	3'
4 1/2" TUBE	2'–6"	4'–6"	0.78	8	#8	4'–0"	#4	2'–2"	5"	3'

* Foundation sized for use where there are no loose, high moisture, or fine grained soil.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION BEHIND BARRIER

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

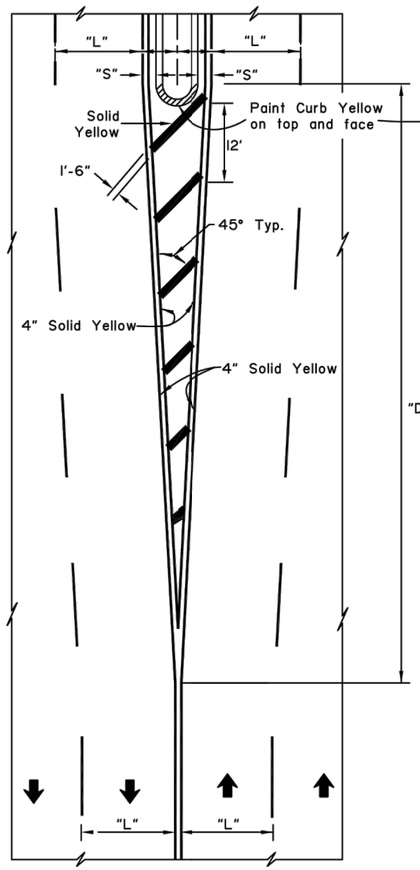
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V11 Thu, Jun/09/22 05:21am

NO.	DATE	REVISION

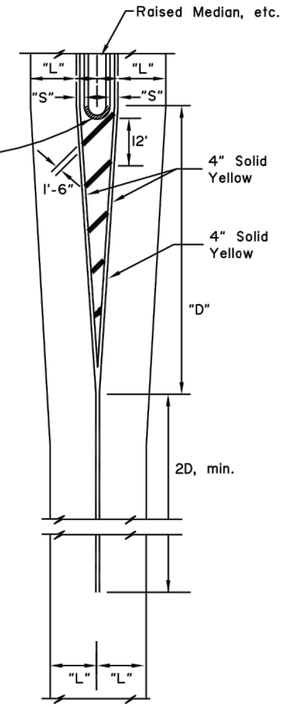
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V12	V15

T-20.04

SHEET | of |

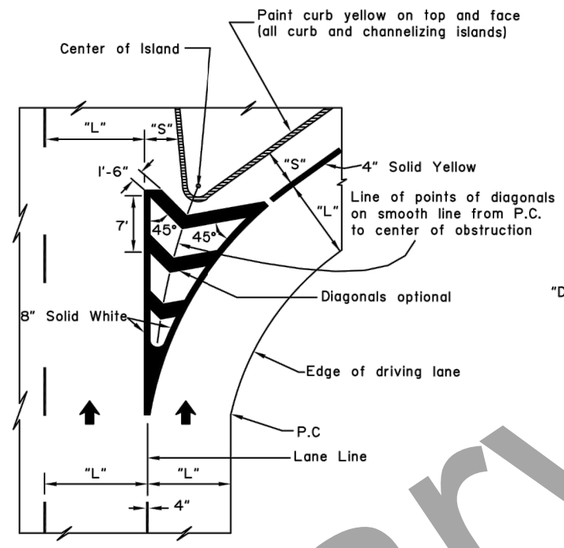


FOUR OR MORE LANES
DRIVE TO RIGHT



TWO LANES
DRIVE TO RIGHT

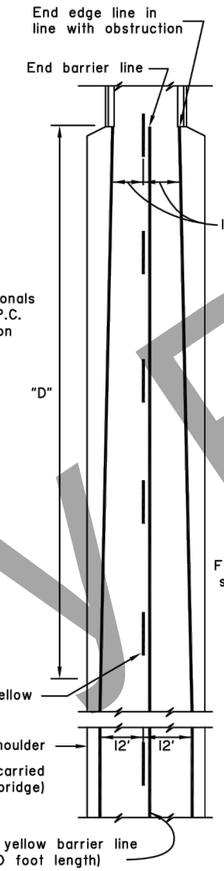
White longitudinal and diagonal markers identical to Four Lane Arrangement.



CHANNELIZING ISLAND

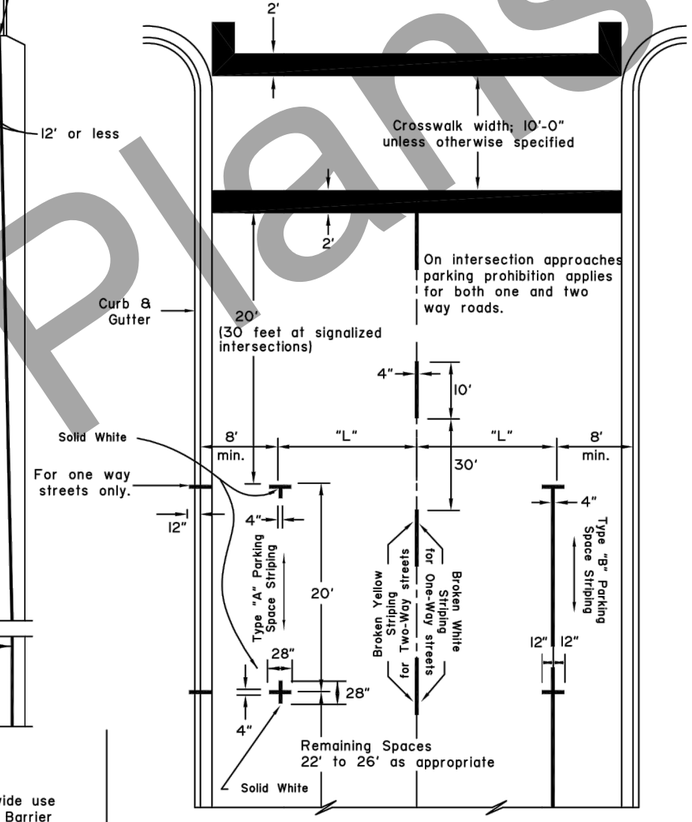
NOTES: "D" = Speed limit (mph) X "S" (offset width in feet) or as indicated on the plans. Minimum "D" = 100 feet urban, 200 feet rural.

APPROACH TO OBSTRUCTIONS



Note: On bridges over 24' wide use standard pavement markings. Barrier lines not used unless otherwise required.

EDGE LINE TRANSITION TO NARROW BRIDGE AND APPROACH BARRIER LINE

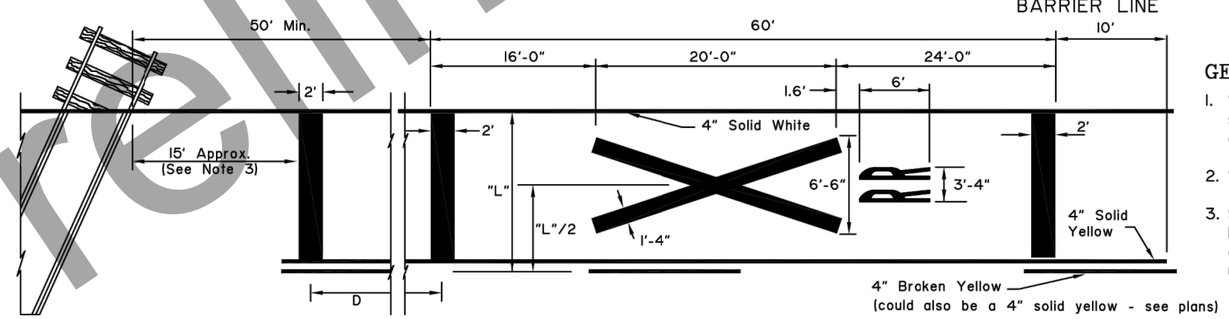


CENTERLINES FOR TWO LANE TWO WAY URBAN ROADS-PARKING LIMIT LINES

RAILROAD CROSSING NOTES:

1. All markings solid while unless indicated otherwise.
2. On 4-lane roadways place railroad crossing approach markings in each lane of the approach.
3. Locate Stop Bar 15' from railroad track or 8' from gate, if present.
4. Place edge lines and lane lines on a uni-directional approach in a normal manner except that the lane line(s) shall be solid 4" white in lieu of broken for a distance of (D+60') in advance of the stop bands.

POSTED LIMIT	D
30 M.P.H.	225'
40	350'
50	475'
60	625'



APPROACH TO RAILROAD CROSSING ON 2 LANE 2 WAY HIGHWAY

GENERAL NOTES:

1. "S"= offset distance as shown on the plans, otherwise 1 to 2 feet.
2. "L"= driving lane width.
3. See the Alaska Traffic Manual for additional guidance and/or restrictions on the use of traffic control devices.

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MAKING APPLICATIONS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

ALASKA STANDARD PLANS

Preliminary Plans

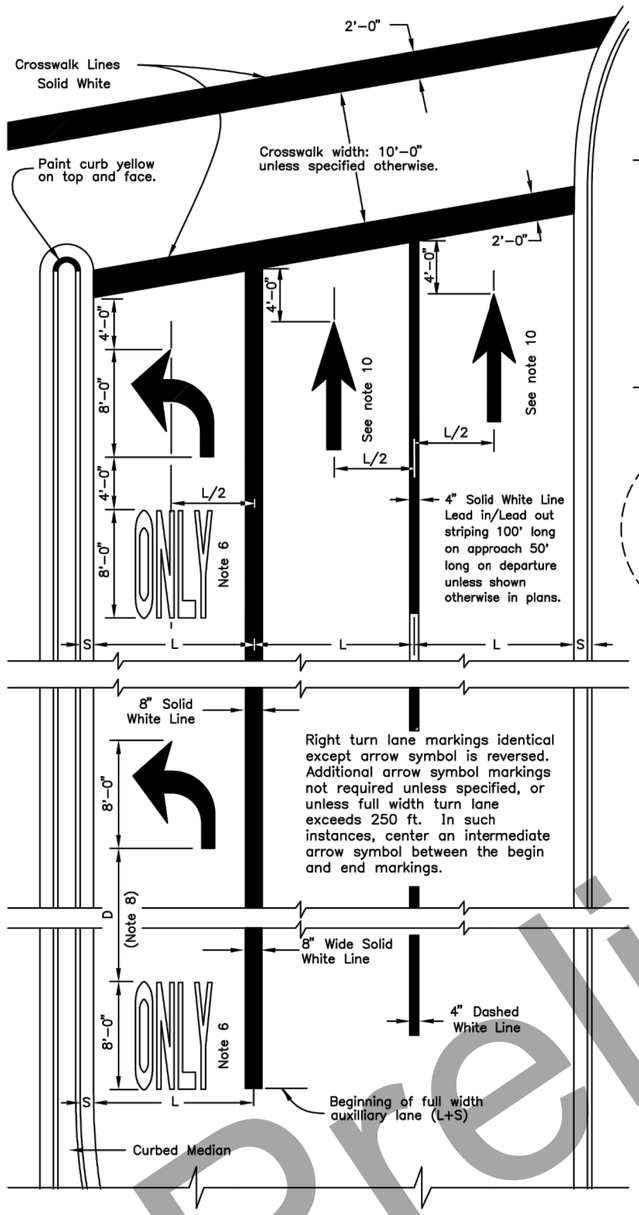
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V12 Thu, Jun/09/22 05:21am

NO.	DATE	REVISION

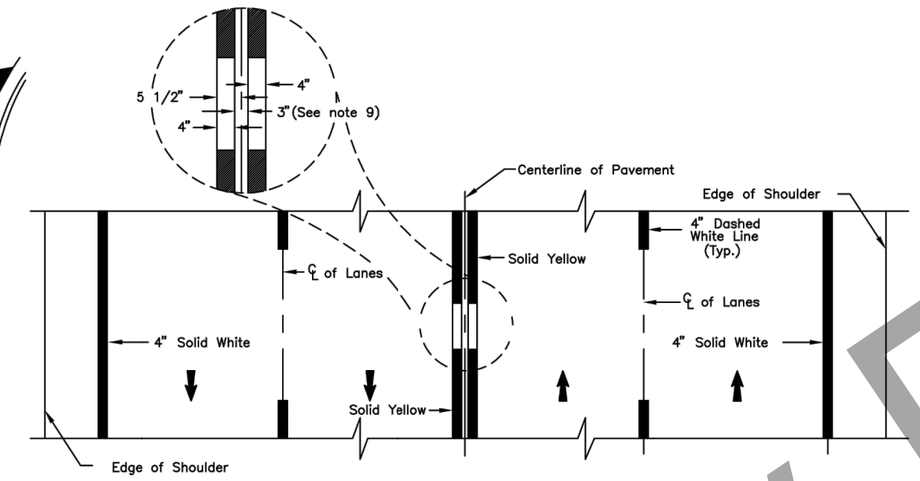
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V13	V15

T-21.04

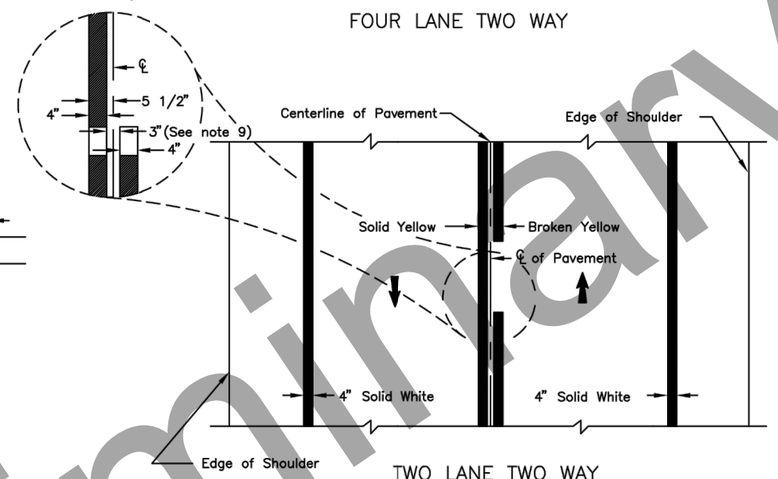
SHEET 1 of 1



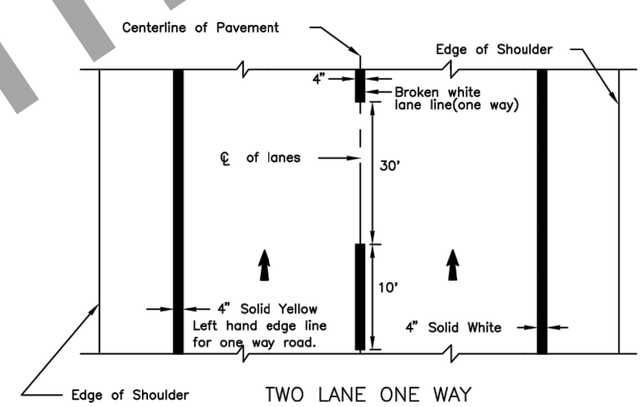
APPROACH TO INTERSECTION



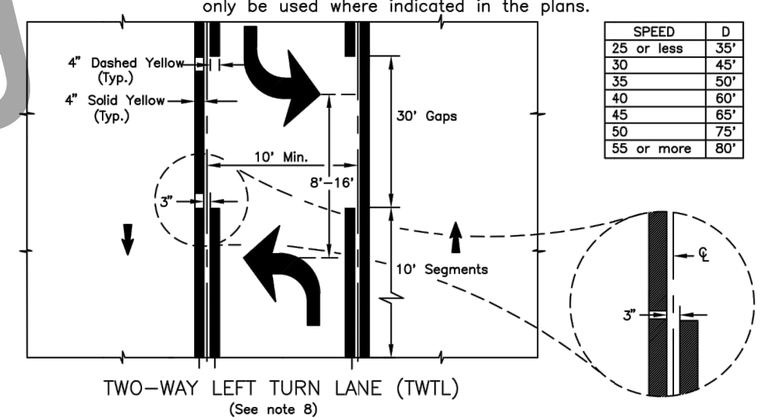
FOUR LANE TWO WAY



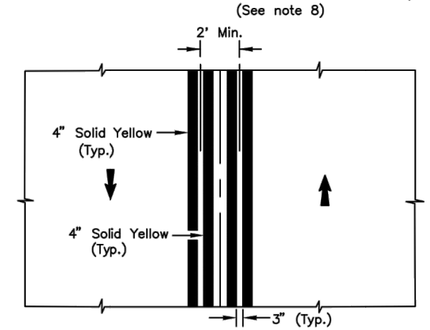
TWO LANE TWO WAY



TWO LANE ONE WAY



TWO-WAY LEFT TURN LANE (TWTL)
(See note 8)



STRIPED MEDIAN

GENERAL NOTES:

1. All markings white unless indicated otherwise.
2. Lengths of stripe and gap for lane and center lines identical.
3. Lane lines for auxiliary lanes are unbroken solid lines.
4. "L" = driving lane width.
5. "S" = shy distance as shown on plans, otherwise 1 to 2 feet.
6. ONLY markings are required where through lanes change to turn lanes. In other cases, apply ONLY markings as indicated on plans.
7. See ALASKA TRAFFIC MANUAL for additional instruction on the use of TRAFFIC CONTROL DEVICES.
8. Adjust distance D between ONLY and Turn Arrow based on SPEED vs. D table. Table may be used for spacing between pairs of TWLT markings.
9. Adjust centerline spacing from 3" up to 5" where recessed pavement markers are required.
10. Arrows and symbols are used for through lanes only when the lane layout deviates from the normal intersection rules, and shall only be used where indicated in the plans.

SPEED	D
25 or less	35'
30	45'
35	50'
40	60'
45	65'
50	75'
55 or more	80'

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING APPLICATIONS

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

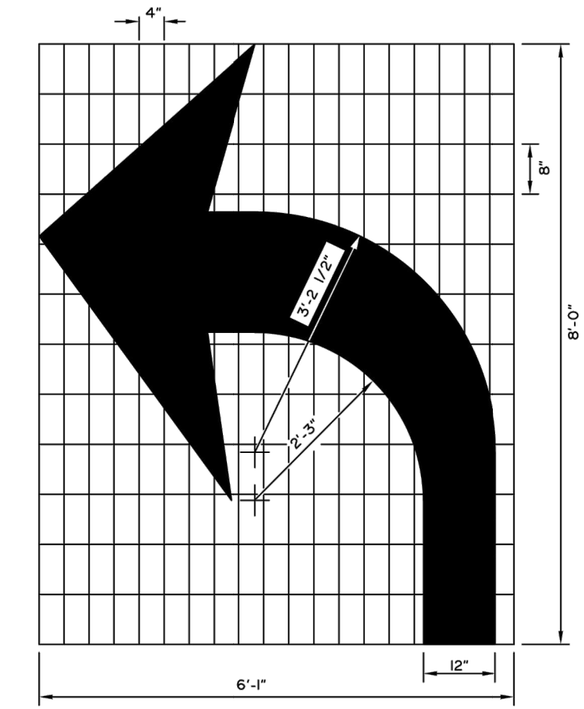
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V13 Thu, Jun/09/22 05:21am

NO.	DATE	REVISION

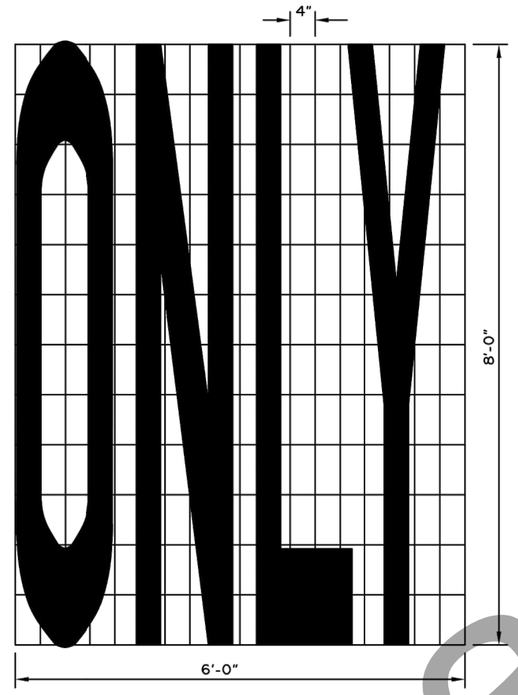
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V14	V15

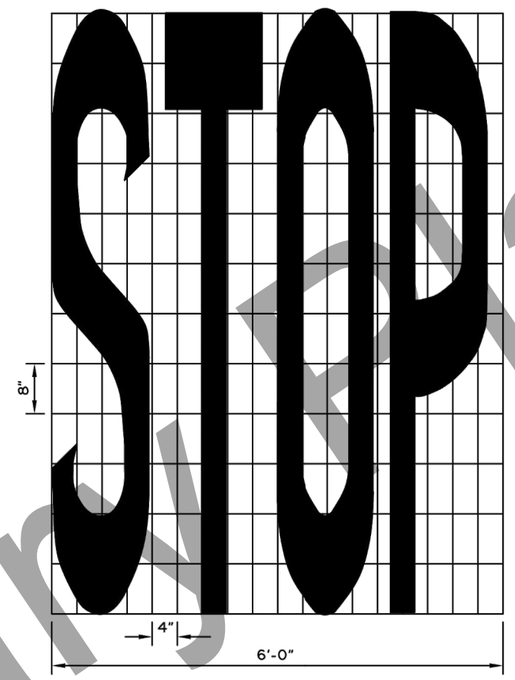
T-22.04

SHEET | of |



Right turn auxilliary lane usage markings identical except arrow symbol is reversed.

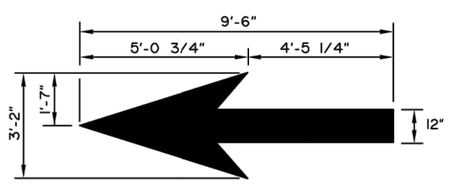




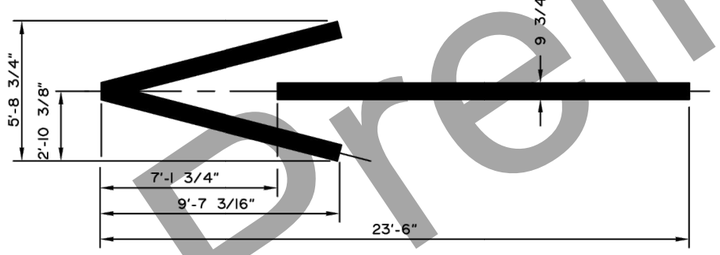
LAYOUT TEMPLATES FOR STENCILS

GENERAL NOTES:

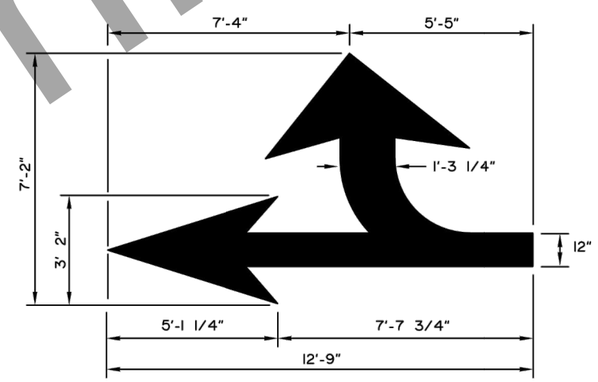
1. All symbols shown shall be white and reflectorized in accordance with the Special Provisions.
2. See the Alaska Sign Design Specifications (ASDS) for lettering and symbols for pavement marking details not provided on this drawing.



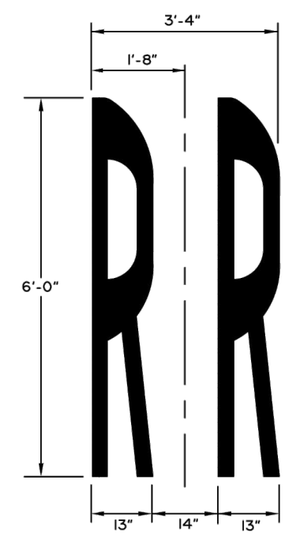
STRAIGHT AHEAD ARROW



WRONG WAY ARROW



COMBINATION ARROW



RAILROAD SYMBOL

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING SYMBOL DIMENSIONS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

ALASKA STANDARD PLANS

Preliminary Plans

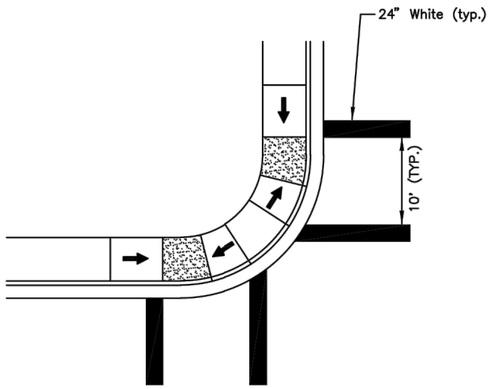
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V14 Thu, Jun/09/22 05:21am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0640013/NFHWY00645	2022	V15	V15

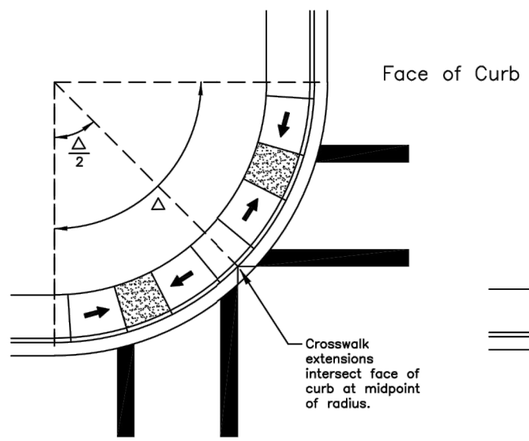
T-23.01

SHEET 1 of 1



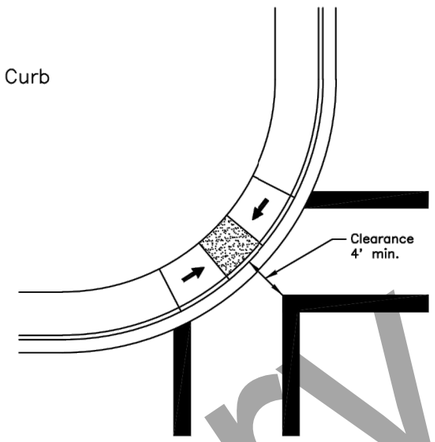
CASE 1

Dual Curb Ramps
Radius ≦ 25'



CASE 2

Dual Curb Ramps
25' < Radius ≦ 50'



CASE 3

Single Central Curb Ramp
25' ≦ Radius ≦ 50'
(Not Recommended)

GENERAL NOTES

1. The crosswalk locations shown assume a 90–degree intersection – adjust as necessary on skewed intersections to ensure that crosswalk landings (for parallel curb ramps) or ramp runs (for perpendicular curb ramps) fall within the inner edges of crosswalk stripes. If Case 3 (not recommended) is used, the layout should also be adjusted to provide at least the minimum clearance while maximizing the offset.
2. If only one crosswalk connects with a curb radius, it should be located as if there were two connecting crosswalks.
3. These details apply to parallel (shown) as well as perpendicular curb ramps.
4. Case 3, the layout for a single central curb ramp, should be used only when installing two ramps is not feasible. It should not be used for radii under 25 feet. See plans for ramp layout at particular locations.
5. Radius is measured to the face of curb.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CROSSWALK LOCATION AT SIGNALIZED INTERSECTIONS

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

ALASKA STANDARD PLANS

Preliminary Plans

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0395476\00645_V-V15 Thu, Jun/09/22 05:21am